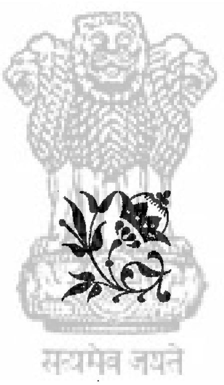
REPORT

OF THE

MYSORE PUBLIC WORKS DEPARTMENT REORGANISATION COMMITTEE



BANGALORE :
PRINTED BY THE DIRECTOR OF PRINTING, STATIONERY AND
PUBLICATIONS AT THE GOVERNMENT PRESS
1958

CONTENTS

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CHAPTER PAGES

I. Introduction .. .. .. 1—5

II. (1) Organisation of the Public Works Department on a functional or territorial basis .. 6—8

(2) Re-allocation of the charges of the Chief Engineers .. .. .. 8—14

III. Setting up separate engineering organisations outside the Public Works Department for the execution of engineering works of other departments :—

(1) for Public Health Engineering works .. 15—17

(2) for Industries and Sericulture departments 17—20

(3) General remarks .. 20—23

IV. Measures for the more effective and efficient execution of the Plan and other Civil Works in the Department :—

(1) Establishment of Designs Sections at all levels .. .. .. 24—25

(2) Establishment of Investigation Units for the projects coming under the Third Five-Year Plan .. .. .. 26—27

(3) Survey of Irrigation Tanks .. .. 27—29

(4) Schedule of Rates .. .. 29—31

(5) Establishment for assessment of irrigation and water resources potential of river basins .. .. .. 31—32

(6) Execution of works .. .. 32—37

(7) Work-load of Divisions and Sub-Divisions 37

(8) Recruitment .. .. .. 37—40

(9) Pay Scales .. .. .. 41—46

V. Reorganisation of Accounts and Stores set up—

(1) Accounts .. .. .. 47—55

(2) Stores .. .. .. 55—58

(3) Budget 58

CHAPTER — PAGES

VI. Delegation of enhanced powers .. 59—65

VII. Establishment :—
- (1) Re-grouping of Circles and Divisions .. 66—67
- (2) Staff requirements of the Chief Engineers' and other offices and also loaning of officers 77—81
- (3) Government Architect .. .. 81—82
- (4) Community Development Works .. 82—83

VIII. General :—
- (1) Town Planning 84
- (2) Research Station .. .. 84—85
- (3) Central Workshop for each Circle .. 85—87
- (4) Bore-wells 87
- (5) Stationery and forms .. .. 87—88

IX. Acknowledgments .. .. .. 89—90

Summary .. .. .. 91—99

Appendices .. .. .. 101—149

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REPORT

OF THE

MYSORE PUBLIC WORKS DEPARTMENT RE-ORGANISATION COMMITTEE.

CHAPTER I.

INTRODUCTION.

The Government of Mysore, in their Order No. P.W.D. 450—E.W.G. 57, dated the 18th November 1957 (Appendix I-A), constituted this Committee for a comprehensive examination of the entire question of re-organisation of the departmental set-up in the Public Works Department and to make suitable recommendations in order to achieve more effective and efficient execution of the Plan and other civil works and to improve the all round efficiency of the Department both in the execution of works and prompt and correct accounting of the transactions of the Department, with the following terms of reference :—

(1) To examine the working of the Public Works Department with reference to the scope and extent of the present Chief Engineers' charges and to make proposals, if necessary, for the re-allocation of charges.

(2) To suggest measures for the more effective and efficient execution of Plan and other civil works in the Department at all levels and to make recommendations for the re-organisation of the Department either at particular levels or as a whole, as the Committee may find necessary.

(3) To examine the need for setting up separate organisation or organisations outside the Public Works Department for Engineering Works in the Local Self-Government, Education, Public Health and other Departments which have sizeable programmes of civil works.

(4) To recommend measures for securing prompt and correct accounting of transactions of the Department at various levels and towards that end to propose such re-organisation of the accounts set-up in the Department as may be considered necessary.

(5) To examine the present codal provisions in respect of Executive Engineers, Sub-Divisional Officers (Assistant Engineers) and above and to suggest the general basis on which and the directions in which modifications may be made including further delegation of powers to departmental officers.

(6) To examine the basic staff requirements of the Department especially at higher levels and to suggest measures of economy wherever feasible.

2. *Composition of the Committee and subsequent changes.*—The following Members constituted the Committee:—

Chairman.

(1) Shri B. S. Narasinga Rao, B.A., B.E., Chief Engineer (Retd.)

Members.

(2) Shri K. S. Gangadhara, B.E., Chief Engineer (Retd.)

(3) Shri M. N. Kamath, B.E., Chief Administrative Officer, Engineering College, Manipal.

(4) Shri S. A. L. Razvi, I.A.S., Secretary to Government, Local Self-Government Department.

(5) Shri T. S. Moorthi, B.Sc., B.E., Chief Engineer, Major Irrigation (North).

(6) Shri C. R. Krishnaswamy Mudaliar, B.E., Chief Engineer, Major Irrigation (South).

(7) Shri M. Veeraraj Urs, I.A.S., Deputy Secretary to Government, Finance Department.

(8) Shri B. S. Srikantiah, I.A.S., Deputy Secretary to Government, Public Works Department (*Member-Secretary*).

When the Committee's work had just commenced, Shri B. S. Srikantiah (Member–Secretary) was appointed Deputy Commissioner, Mandya District. In his place, Government, in their Order No. P.W.D. 496—E.W.G. 57, dated the 31st December 1957, appointed Shri L. C. Muniswamy Reddy, now Chief Engineer, as full-time Secretary. Further, Shri S. A. L. Razvi was transferred as Divisional Commissioner, Belgaum, and in his place Shri M. Vasudeva Rao, I.A.S., was appointed as Member, and Shri G. S. Ganapathy, Chief Engineer (General), was appointed as additional Member in Government Order No. P.W.D. 498—E.W.G. 57, dated 5—7th February 1958. Thus the full-fledged Committee is working since the middle of February 1958.

3. *Time allowed for the Committee.*—The Committee was requested to forward its Report within three months. As most of the Members had to perform their normal duties in addition to their work in the Committee and as two Members were residing outside at Munirabad and Manipal, it was impracticable for them to meet frequently and the meetings had to be arranged to suit their convenience. For these reasons and on account of the inclusion of new Members from time to time, Government was requested to extend the time-limit to the end of June 1958. Government in their Order No. P.W.D. 56—E.W.G. 58, dated the 10th March 1958, granted this extension. The Government Orders are noted in Appendix I-A.

4. In addition to the terms of reference, Government, during the course of the proceedings of the Committee, forwarded references received from the Government of India, Heads of Departments, etc., for the views of the Committee. The list of such references is noted in Appendix I-B. On the representation from the members of the non-Gazetted and Gazetted services regarding their salary, promotion, etc., it was suggested to the Chairman of the Committee that these questions may be dealt with in the Report of the Committee under the term of reference ' Efficiency '.

5. *Procedure.*—The Committee met for the first time on 4th December 1957 and approved a questionnaire [Appendix I-C(1)] to be sent to several States, institutions, retired officers both inside and outside the State, and officers in service. A list of persons and institutions to whom the questionnaire was sent is noted in Appendix I-D. The Committee also decided to visit Bombay, Hyderabad, Madras and Trivandrum as well as two River Valley Projects, *viz.*, Koyna (Bombay) and Nagarjunasagar (Andhra Pradesh), to have personal discussions with the Chief Engineers regarding the subjects of the terms of reference, the set-up in their States, and in the special works, the difficulties they have experienced and are experiencing for the speedy and efficient execution of works, and the remedies they have in view. The itinerary of the Committee is given in Appendix I-E. Another questionnaire [Appendix I-C(2)] was sent to all Superintending Engineers and some Executive Engineers of the Mysore Public Works Department.

6. The Committee in its first meeting decided to get the remarks of the Accountant General regarding the organisation of the accounts set-up, and on receipt of his views, a questionnaire was prepared [Appendix I-C (3)] and was sent to the Chief Accounts Officer and the Financial Assistant to the Chief Engineer. The Committee issued another questionnaire [Appendix I-C(4)] on the subject of Public Health Engineering to ascertain the views of the officers dealing with Public Health Engineering schemes in the State on the need for any establishment of a special nature for the sanitary works and on other related matters.

7. *Number of meetings.*—The Committee held in all nine meetings. The calendar of the dates of meetings and the business transacted are noted (Appendix I-F). In the first two meetings, the general subjects of procedure, issue of questionnaire, etc., were discussed. On receipt of the replies to the questionnaires [Appendices I-C (1), (2) and (4)] and after analysing the views and suggestions in the replies, the Committee interviewed the officers in their fourth, fifth and sixth meetings, to seek further clarifications through personal discussions. On receipt of the replies to the questionnaire on accounts [Appendix I-C(3)], a sub-committee consisting of Shri Veeraraj Urs, Shri M. N. Kamath and the Chairman and the Member-Secretary interviewed the Chief Accounts Officer and the Financial Assistant to the Chief Engineer and also the Accountant of the Bangalore Division. In its seventh and eighth meetings, the Committee discussed each of the subjects on which it was requested to make recommendations according to the terms of reference. The list of officers interviewed is noted in Appendix I-G. The final meeting was held from the 23rd to 26th June 1958 to consider the draft and finalise the Report.

8. We have considered in detail the terms of reference, either individually or in groups of allied subjects (*e.g.*, Establishment), as decided in our first meeting. After careful consideration of the views and suggestions put before us and the Estimates Committee Reports of the Legislatures of several States, we recommend that generally the constitution of the Bombay Public Works Department with regard to staff, powers and procedure in accounts and recruitment would be suitable for adoption

in Mysore State. We have endeavoured in our recommendations to draw attention to only such facts as are necessary and relevant to our conclusions. If these recommendations are accepted and implemented, we feel that the Department can discharge the work more efficiently and speedily, as the responsibility of each officer of the Department is defined, both with regard to work and accounts. We, however, feel that piecemeal implementation of the recommendations will not achieve the desired object.

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CHAPTER II.

(1) *Organisation on a functional or territorial basis.*

9. (*a*) The activities of the Public Works Department are the investigation, designing, execution and maintenance of highways, bridges, buildings, major and minor irrigation projects, sanitary, water supply and drainage works, etc. It was found necessary at the outset, to decide whether the works are to be administered on a functional basis or territorial basis, for the formulation of the proposals and decisions on the terms of reference.

(*b*) The views expressed by the officers in service who were interviewed by the Committee and the replies received from the Divisional Commissioners, Administrators, retired Engineers in and outside the State, etc., with reference to the Questionnaire sent to them, reveal that the division of the Department on a functional basis prejudices efficient work and close co-ordination in the districts and hence the functional division should be only **AT THE TOP LEVEL** (*i.e.,* at the Chief Engineers' level), while at the level of the Superintending Engineers and Executive Engineers it should be on a territorial basis, and not on a functional basis.

(*c*) The Chief Engineer (General), Madras (the only State where there is a Highways Department with a separate cadre), in his discussions with the Committee, during our visit to Madras, had stated that this separate division had created problems in service conditions and also gave room for dissatisfaction. He was therefore of the opinion that, at the district level, the Executive Engineer must be a 'Multi-purpose man'.

(*d*) In the same Madras State, the Estimates Committee of the Madras Legislative Assembly on the Public Works Department state, in their sixth Report (Appendix II-A), that, besides the overlapping of jurisdictions, the division of the Department into separate Branches on a functional basis is not conducive to expeditious execution of works and that there will be lack of co-ordination. After due consideration of the defects in this system, they are of the view that it is possible to combine all these functions, *viz.*, Buildings, Irrigation, Highways, Public Health, etc., on a territorial basis, at the Superintending Engineers' and Executive Engineers' levels, and that the functional division must be confined to the Chief Engineers' level only.

(*e*) The Public Works Department Re-organisation Committee of Travancore-Cochin, after discussing at length the merits and demerits of the set-up prevailing in Madras, with special reference to the Highways Department, have finally stated that it is desirable to form composite territorial divisions, combining all works such as buildings, highways, irrigation, etc., so that each Division may be compact, instead of having wide jurisdiction, which tends to dilute supervision and concentration of attention on the works (*vide* extract in Appendix II-B).

(*f*) The Development Commissioner has informed the Committee that the Executive Engineers of districts should deal with all kinds of works of the Public Works Department and co-ordinate with the Community Development works in the districts.

(*g*) The disadvantages of the system of functional division, namely (i) overlapping of jurisdictions, (ii) increase of establishment by over 50 per cent, (iii) less supervision, (iv) less concentration of attention on works, (v) want of co-ordination and (vi) the problem of settling matters connected with 'Service', have been clearly and briefly explained in the reply of Shri P. V. R. Rao, Chief Secretary to the Government of Mysore, to the Committee's questionnaire (extract in Appendix II-C), and his view is that the division of the Department from top to bottom on a functional basis is not sound.

10. *After examining all these Reports and after considering the pros and cons of the different set-ups, we are of the view that the division of the Department on a functional basis should, if at all, be only AT THE TOP LEVEL, and that the Superintending Engineers, Executive Engineers and Assistant Engineers should be only on a territorial basis, provided, however, that our recommendation to set up a separate organisation for investigation and designs at the centre is accepted. In case the workload becomes heavy due to additional or special works, separate Sub-Divisions or Divisions may*

be created, depending upon the workload, and attached to the respective territorial offices.

(2) *Re-allocation of charges of Chief Engineers.*

The first item of the terms of reference is to examine the working of the Public Works Department with reference to the scope and extent of the present Chief Engineers' charges and to make proposals, if necessary, for the re-allocation of charges.

11. There are at present four Chief Engineers: one is permanent and the other three are temporary. The allocation of the work is as noted below:—

Designation		*Charge*
(1) Chief Engineer (General).	Permanent	Irrigation—medium and minor; Highways, Bridges, Buildings, Sanitary and Water Supply; Establishment besides attending to meetings. (The grant for 1958-59 is Rs. 14 crores.)
(2) Chief Engineer, Major Irrigation (North).	Temporary till 1st October 1958.	River valley and other major irrigation projects in Bombay and Hyderabad Karnatak. (The grant for 1958-59 is Rs. 1.75 crores).
(3) Chief Engineer, Major Irrigation (South).	Temporary till 1st April 1961.	River valley and other major irrigation projects in former Mysore, South Kanara, Kollegal and Coorg. (The grant for 1958-59 is Rs. 3.20 crores).
(4) Special Chief Engineer, Sharavathy Valley Hydro-Electric Project.	Temporary till 1st April 1962.	Sharavathy Valley Hydro-Electric Project.

12. The posts of the first three Chief Engineers, *viz.*, Chief Engineer (General), Chief Engineer, Major Irrigation (North), and Chief Engineer, Major Irrigation (South), were formed on the 1st of November 1956. Recently, while the Committee was in deliberation, the post of the Special Chief Engineer, exclusively for the

charge of the Sharavathy Valley Hydro-Electric Project, was formed. It may be mentioned in this connection that, before the integration of States, the area of the erstwhile Mysore State was 33,957 square miles and was manned by two Chief Engineers, namely, Chief Engineer (General) and Chief Engineer (Major Irrigation). The Chief Engineer (General) was in charge of highways, buildings, minor and medium irrigation, sanitary, water supply and drainage works, in addition to Establishment, while the Chief Engineer (Major Irrigation) was in charge of major irrigation projects inclusive of the Sharavathy Hydro-Electric Project. It may thus be seen that the jurisdiction of the Chief Engineer (General), as it is now, covers the entire State of 73,560 square miles, which is more than double the erstwhile Mysore State. He is in charge of all kinds of works of the Public Works Department. All the Chief Engineers who were and are holding this post since integration are of the opinion that, due to the all-round increase in the activities as well as the geographical jurisdiction of the State, it is physically impossible for one person to manage effectively and efficiently all the works in the enlarged State. The increase in the work-load is given in the graph in Appendix II-O.

13. The works of the Department can be classified into two distinct technical groups, *viz.*, "structural" (roads, bridges, buildings, etc.), and "flow of water" (storage, irrigation, water supply, etc.). Normally, there should be one Chief Engineer for each of these groups. This is the general set-up in the States of Bombay, Madras and Kerala. The development of the technique of each of the branches, *i.e.*, the structural works (roads, bridges and buildings) and the flow of water (irrigation) has been very great. It has now become all the more necessary that each Branch should have, at the top, a separate Chief Engineer to make the best use of technical knowledge in the best way possible to attain efficiency and economy. The present office of the Chief Engineer (General) may, therefore, be divided into two branches, *viz.*, (1) Chief Engineer (Roads, Buildings and General) and (2) Chief Engineer (Irrigation and Public Health). With this arrangement, the work-load can be evenly distributed between these two Chief Engineers. This was the set-up that was existing before integration in many States and continues to be the

same even now in States like Bombay, Madras and Kerala.

14. We feel that it is not desirable that the two branches mentioned above should be further split up and administered by a multiplicity of officers of more or less the same status, as it will not be conducive to efficiency and economy.

15. Shri Vasudeva Rao pointed out that the proposal to have two Chief Engineers having parallel jurisdiction all over the State involved certain defects :

(i) The Executive Engineer in the district level to work under two bosses and such a proposal always leads to administrative difficulties.

(ii) Each of the Chief Engineers will have a very large jurisdiction.

(iii) Considering that the Committee has already rejected the proposal to have functional distribution of work, there is no special merit in having functional distribution at the Chief Engineers' level and this would also lead to administrative difficulties. The co-ordination will have to be done at Government level and there will be considerable waste of time in two Chief Engineers having to deal with Government on similar matters. Each of the Officer will have to deal with the entire State and for exercising adequate supervision the amount of touring and work-load will be very heavy.

If therefore Government were to accept the proposal that a separate organisation be set up for designs and investigation, it should be much better if the jurisdiction in the entire State could be divided into two fairly equal portions, each in charge of a Chief Engineer. There would be in addition a Chief Engineer (General), who could deal with Planning, Designing and over-all supervision, co-ordination, establishment and stores, etc., and would also take over the heavy duties involving in attending various meetings and conferences at the State level and the Government of India. There would also be advantage if the State Government would have to deal with one administrative and technical authority on all engineering matters. While the charges of the two other Chief Engineers would be less wide, this would also ensure that there would be unitary command from the top to the Executive Engineers' level, which, in his opinion, was essential for administrative purposes.

16. Another suggestion made by Shri Gangadhara was that there should be another Administrative Engineering officer or co-ordinating Senior Engineer and that he should be full-fledged Secretary to Government in the Public Works Department. He had also suggested that there should be a Chief Engineer solely in charge of Public Health Engineering in the State.

17. These suggestions were thoroughly examined and discussed by the members. It is felt that the system of having two zonal Chief Engineers with the Chief Administrative Engineering Officer on the top is not favoured, due to the following reasons:—

(*a*) It does not conduce to quick and effective disposals and decisions, which are very necessary in these days of planning to achieve the stipulated targets.

(*b*) All papers have to be routed through the Chief Administrative Engineer to Government, who will in effect be a spoke in the wheel.

(*c*) It is against the principles of integration of areas with reference to the works. Complication arises in the adjustment of 'Service' conditions.

(*d*) It is uneconomical, as it involves duplication of work and establishment. Difficulties in budgeting and allocation of funds are also created.

(*e*) It leads to unequal distribution of work-load.

(*f*) It involves the employment of a high Engineering Officer.

(*g*) There is bound to be disparity in the quality, standard and procedure of work in the two zones, which is certainly not desirable.

(*h*) As regards the other point raised, *viz.*, that it will be very difficult for the Executive Engineer of a Division to carry out instructions of more than one superior authority, it may be stated that the two branches now proposed being two distinct units, there should be no difficulty for the Executive Engineer to send all matters pertaining to irrigation and public health to the Chief Engineer (Irrigation and Public Health) and the others to the Chief Engineer (Roads, Buildings and General). This system has worked out satisfactorily all these years in the former Mysore, Bombay Karnatak, Hyderabad Karnatak and all other integrated areas.

(*i*) For co-ordinating the works of the two Chief Engineers in all common matters such as Establishment, general stores, etc., a Board—consisting of all the Chief Engineers with the seniormost Chief Engineer as the Chairman—has been constituted by the Government of Mysore in their Order No. P. W. Adm. 342-45—Adm. 4-56-3, dated the 11th December 1956. This procedure has been endorsed by the Estimates Committee of the Madras Legislative Assembly in their Sixth Report. This is reported to be working satisfactorily and this will ensure the desired co-ordinating agency, as suggested in paras 15 and 16, thus avoiding the additional expenditure of having another Chief Engineer.

After discussion in great detail of the pros and cons of the various suggestions, we decided to have only two permanent Chief Engineers for the State for the normal work—one Chief Engineer (Roads, Buildings and General) and one Chief Engineer (Irrigation and Public Health), each being separately responsible to Government.

18. Regarding the suggestion that there should be a co-ordinating Engineering Officer as Secretary to Government, it may be stated that this suggestion has been advocated by all the Officers interviewed by the Committee. The Committee had before it the Government Order No. 1156-60—C. B. 37-40-1, dated the 4th September 1940, creating the post of a separate Secretary with the rank and status of a Deputy Commissioner. Extracts from the Report of the Committee appointed by the Government of India to examine the working of the Central Public Works Department and extracts from the fourth Report of the Estimates Committee of the Lok Sabha were also before us, where the reasons for an independent scrutiny are explicitly stated. Some of the Members felt that this subject was not within the purview of the terms of reference, as the Committee is set up only for the reorganisation of the Public Works Department. After considering the views and objections raised

against the present system of having a non-technical Secretary, we note as under :—

> "In connection with the Administrative organisation of the Public Works Department, many Senior Engineers have expressed the opinion that the Secretary to Government in the Public Works Department should be the Chief Engineer. One of the reasons which has led to this comment is that the technical proposals of the Chief Engineer are scrutinised from a technical point of view in the Secretariat, and they have expressed the view that, for such a purpose, the most competent person to advise the Government is the Chief Engineer, and that there should be no criticism on the technical proposals sent up by the Chief Engineer. However, since this Committee was constituted to deal with the Public Works Department, and since the matters to be dealt with in the Secretariat did not appear to be within the purview of this Committee, we have refrained from expressing any opinion thereon."

19. With regard to the suggestion for having a separate Chief Engineer for Public Health Engineering works, in all the States we visited there is no separate Chief Engineer for this Branch, as this Section has a very limited sphere of activity, and they have only a Superintending Engineer working under one of the two Chief Engineers—generally under the Irrigation Chief Engineer. This has been discussed in detail under the item 'Public Health Engineering'. We consider that there is no necessity for a separate Chief Engineer for Public Health Engineering. We reiterate that it is not desirable to have a number of officers of equal status to administer each branch of the Public Works Department.

20. Regarding the other two Chief Engineers—Major Irrigation (North and South)—we examined their work-load and the balance of work in their areas. As the bulk of the programmed work in the north zone is over, the work-load has been considerably reduced. The grant for the year 1958-59 is Rs. 1.75 crores. After the appointment of a separate Chief Engineer exclusively for the Sharavathy Valley Hydro-Electric Project, which was formerly under the jurisdiction of the Chief Engineer,

Major Irrigation (South), the work-load has been decreased and carries a grant of Rs. 3.20 crores for the year 1958-59. Both the officers, *viz.*, Chief Engineers, Major Irrigation (North and South), are in charge of two major projects in the same valley. Hence, after careful examination of the work-load and other factors, we consider that both these offices may be amalgamated under the designation of Chief Engineer (Irrigation Projects), as in Bombay, with headquarters at Bangalore. This combination with unitary control facilitates the working of the agreement regarding the sharing of the Tunga-Bhadra waters between the Bhadra and the Tunga-Bhadra Reservoirs.

We have no comments to offer regarding the Special Chief Engineer, Sharavathy Valley Hydro-Electric Project, as this post is not included in the terms of reference.

21. *In conclusion, we finally recommend that, apart from the Chief Engineer, Sharavathy Valley Hydro-Electric Project, there should be three Chief Engineers, as detailed below*:—

- (a) *Chief Engineer (Roads, Buildings and General)—Permanent*;
- (b) *Chief Engineer (Irrigation and Public Health)—Permanent*;
- (c) *Chief Engineer (Irrigation Project)—temporary: for five years till* 1963 *to complete the spill-over projects of the Second Five-Year Plan;*

with a Board consisting of all the Chief Engineers to deal with all problems of common interest like Establishment, Stores, Machinery, etc., with the seniormost Chief Engineer as the Chairman.

CHAPTER III.

To examine the need for setting up a separate organisation or organisations outside the Public Works Department for Engineering Works in the Local Self-Government, Education, Public Health and other Departments which have sizeable programme of Civil Works.

The third item of the terms of reference is to examine the necessity for separate organisation or organisations for other Departments which have sizeable programmes under " 50. Civil Works ".

(i) PUBLIC HEALTH ENGINEERING.

22. The question of setting up a separate Department for Public Health Engineering, for the execution of sanitary, water supply and drainage works, was considered in great detail. This specific item was included in the questionnaire [Appendix I-C (1)] sent to retired officers inside and outside the State, and to the officers in service, for ascertaining their views. Most of the officers have stated in their replies to this questionnaire that there is no need for a separate organisation as the work-load is too low to justify such a set-up, and that the nature of the work is such as it should be under the Public Works Department and can be managed by the normal Public Works Department staff. In all the States that we visited except Andhra Pradesh, there is no separate organisation outside the Department for Public Health Engineering, but only a Superintending Engineer, designated as Sanitary Engineer at the Centre working under the Chief Engineer. In Andhra Pradesh there is a separate Chief Engineer for the Telangana area, called Chief Engineer for Local Self-Government. In Kerala, a proposal to appoint a Chief Engineer for Public Health was under consideration.

23. To examine this aspect in greater detail, a separate questionnaire [Appendix I-C (4)] was sent on this subject of Public Health Engineering, to the officers who are in the actual execution of such works, in the New Mysore State. All of them stated that there was no need either for a separate set-up or for a separate cadre.

They further stated that they had no special training and they were all Engineers of normal Public Works Department. They further averred that, as the works of execution are purely structural and the housing of machinery, they can be executed by the normal Public Works Department staff. In a water supply scheme, about 50 per cent of the cost will be for pipes and 10 to 15 per cent for proprietory machinery, leaving a balance of 35 per cent for construction of structural work, for which no specialised staff is necessary. In the recent standard books on water supply and waste water disposal, it is stated that a Civil Engineer who develops competence in chemistry and biology can become a good Sanitary Engineer.

24. A good knowledge of the principles of water purification and water analysis in a water supply scheme, and waste water treatment in regard to drainage, is all that is needed. All the officers stated that, if a central design and investigation section is established under a Superintending Engineer, called Sanitary Engineer, having special training and experience in water supply works and drainage, the normal Public Works Department will be able to execute the works as per blue-prints supplied by the designing section. The technical skill is mainly in investigation and designing. A specialist section with the Sanitary Engineer as its head at the State level should be set up for the different types of works for surveys, designs and planning.

25. We read the extract from the fourth Report of the Estimates Committee of the Madras Legislative Assembly, on the Sanitary Engineering Department, for 1956-57 (extract in Appendix III). The Committee have held that there was no need for any separate Sanitary Engineering Department with a Chief Engineer, and that the volume of work does not warrant it. They have also stated that the designing and execution should not be in one and the same hand as they feel that designing requires expert knowledge, skill and experience and that the energy and talent of the designer should not be wasted in execution.

26. We examined the work-load of the Sanitary Divisions of the Sanitary Circle in the former Mysore State, extending over three districts, and it was found to be too

low. The jurisdiction being large, there will be lack of intensive supervision. It was further brought out that, as the works are mostly contribution works, the reconciliation of treasury accounts has become difficult as the payment will be in different treasuries with the jurisdiction extending over two or three districts. In the integrated areas, these special Divisions are under the control of the General Circle of the Public Works Department, except in Hyderabad Karnatak.

After careful consideration of the views and the suggestions put forward before us through written memoranda and oral discussions, we recommend :—

(i) *that there is no need for a separate Public Health Engineering set-up outside the Department; we have already stressed in Chapter II that it is not desirable to carry out the works on a functional basis;*

(ii) *that there should be a central Investigation and Designs Section, with a Superintending Engineer (Public Health) having special training and experience in water supply and drainage works, under the Chief Engineer, to design and send blue-prints for execution;*

(iii) *that the works may be executed by the general Public Works Department; and*

(iv) *that, depending upon the extra work-load, separate Sub-Divisions or Divisions may be created and attached to the respective Divisions or Circles in their territorial jurisdiction. This will ensure economy in establishment and will enable efficient supervision during the execution of works. The formation of a division with wide jurisdiction over two or three districts is not commended.*

(ii) INDUSTRIAL, SERICULTURE AND OTHER DEPARTMENTS.

27. Next we took up the two Departments of (*a*) Sericulture and (*b*) Industries, which have Public Works Establishments working at present under the Directors of the respective Departments. We interviewed the two Executive Engineers of the Public Works Department

who are now working in those departments. They explained the difficulties encountered by them under the present arrangement in respect of:

(*a*) sanction to the estimates,

(*b*) payment for the works done,

(*c*) proper accounts and submission of accounts to the Accountant General,

(*d*) jurisdiction of works, and the dearth of contractors, and

(*e*) other disadvantages.

Sanction to the estimates.—There are no specific codal rules governing the sanction to the work estimates—administrative as well as technical—in those departments, so much so, much difficulty is experienced by them in this regard.

Payment for the works done.—Payments are not promptly made for the works done for want of sanction to the estimates, allocation of grants and lack of proper delegation of powers.

Proper accounts and submission of accounts to the Accountant General.—The auditing of work bills is different from that of the Public Works Department, as they have no specific rules governing the audit of work bills. Even the stores account is different from that of the Public Works Department. It was also learnt that no monthly accounts are being sent to the Accountant General from the Executive Engineer, Industries Division, as he is not a paying officer.

Jurisdiction.—There is only one officer of the status of an Executive Engineer in each of these Departments, and their jurisdiction extends over the entire State. It is rather impracticable for the officers to have an effective supervision over the works scattered all over the State. Moreover, a few of the works are not of appreciable magnitude, so much so, they are experiencing difficulty in getting contractors for the execution of those works.

Other Disadvantages.—The Public Works Department officers working in these departments would not get the benefit of the advice of the superior officers of the specialised Department, *viz.*, the Public Works Department, for the efficient execution of works, nor can other departmental heads supervise and control the works carried out by the Public Works Department officers under them.

28. The Sericulture Division, which was under the control of the Director of Sericulture, has been transferred to the control of the Chief Engineer. This transfer has given a tangible relief so far as scrutiny and sanction to the estimates are concerned. But the other disadvantages are there. The views of the officers working in those departments are, the working would be better supervised and executed if the control is under the Public Works Department where definite procedure and codal rules exist for the execution of works, maintenance of accounts and payments for the works done.

29. The views expressed by Shri P. V. R. Rao, Chief Secretary to the Government of Mysore, in his reply to the Committee's questionnaire in this regard merit consideration. He has clearly stated that there should not be a separate departmental organisation and that the loaning of officers from the Public Works Department will affect efficiency. A large geographical charge involves (*a*) less intensive supervision, (*b*) waste of time in travelling and (*c*) waste of money on travelling allowance. If, in any particular area, there are intensive works, then a separate Division or Sub-Division, depending upon the work-load, may be created for the purpose and they may be attached to the Circle or Division of the Public Works Department.

30. The Superintending Engineers who were interviewed opined that the works should be carried out in the Public Works Department only.

After taking into account the views of the officers and the difficulties encountered by them regarding payment, accounting, acquisition of stores, lack of technical supervision and scrutiny, we recommend that all Civil Works must be executed by the Public Works Department alone and that the setting up of organisations under the control of other administrative departments does not conduce to efficiency. As a general principle, there should *be no division of work either on a functional basis or on a departmental basis, and all the works should be carried out by the Public Works Department.*

(iii) GENERAL.

31. Regarding the bottlenecks in the progress of water supply schemes, the officers brought to our notice certain factors that impede their progress. The pipes and specials cost more than 50 per cent of the estimate. The local bodies always insist on cast iron pipes, though other kinds of pipes which can stand the pressure would be available. Another factor brought to our notice was the authorisation of grant and sanction in four instalments. We feel that this can be dispensed with and the entire block grant may be placed at the disposal of the Public Works Department.

We wish to offer the following suggestion in regard to the deputation of officers for specialised studies. The Mysore Government is sending officers in batches to undergo a course in Public Health Engineering for three months in Calcutta and Guindy. This will be a refresher course of an academical nature. The technique of water purification and sewage disposal is developing with rapid strides. We, therefore, feel that men in batches of three or four should also be sent to foreign countries to stay in the factories of manufacturers of proprietory machinery such as pumps, floculators, filters, etc., and to study the system of water supply and sewage disposal in metropolitan works. They should, after return, visit the big works in India also.

As the analysis of water and the deduction of the results is the key for the prevention of water-borne diseases, we recommend that the operators in charge of water works should have this training, which they can have in Public Health Institute, Bangalore, for a period of three or four months. In a big water supply scheme there will be a chemist ; we feel that even the operators should have some basic training.

We agree with the opinion expressed by the officers that the maintenance of water supply should not be entrusted to Municipalities.

32. About the grounds of complaint from other departments that the Public Works Department is unable to attend to their requisitions promptly, all the Public Works Department officers, when specifically questioned on the point, brought to our notice the following facts :—

(i) The outside departments do not intimate their requirements in good time, and if this is done the works could be planned properly and the estimates prepared well in time.

(ii) Additions and alterations in the design are demanded at several stages and even when the works are actually in progress.

(iii) The administrative approval will have been given even before the site is acquired and many a time the site gets altered after the sanction to the work is conveyed.

(iv) Sanction for the required establishment is not given while sanctioning the estimate for the work ; so there will be delay in posting the staff.

(v) Sometimes, the other departments ask the Public Works Department to take up the work at the fag end of the year for fear of lapse of grant.

(vi) The inadequate powers of sanction at different levels.

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The main defect, as explained by the officers of the Public Works Department, is that the administrative sanction from the department concerned is not reaching the Public Works Department in time. There is enough force in this statement and we recommend the following measures :—

(1) Standard type designs duly approved by the concerned departments for all the general types of buildings such as Medical, Educational, Industrial labour, etc., should be got prepared and the quantities of each item of work tabulated and approved by the Chief Engineer, except for foundations. An approximate estimate of the cost for each design, based on the up-to-date schedule of rates, should also be approved by the Chief Engineer, as an appendix. They should then be got printed and distributed to the Departments concerned. The special

designs can be attended to by the Designing Section under the Chief Engineer. This procedure will go a long way in eliminating delays in according administrative approval.

(2) It should be made obligatory that the other departments should apprise the Public Works Department of their schemes to be taken up in the next financial year by December, to enable the Public Works Department to take further action for sanction and execution according to rules.

(3) The administrative approval should not be conveyed unless the land is acquired and handed over to the department. It should be made clear to the administrative department that, until the land is handed over to the possession of the Public Works Department, the administrative department will be held responsible for the delay.

(4) While according administrative approval to the estimate, sanction may be simultaneously accorded for the additional establishment required for the execution of the works. This will ensure the posting of the staff immediately the work is sanctioned.

(5) Technical sanction should be accorded within three months after the administrative approval is communicated.

(6) A lumpsum amount should be provided in the Budget of the Public Works Department for the investigation and preparation of plans and estimates. The cost incurred may be finally adjusted and charged to the concerned works. Grants as per phased programme should be made available in the Budget.

(7) The administrative department, while countersigning the estimates and plans, should consider properly all the provisions in detail and effect any additions and/or alterations suggested at that stage, so as to incorporate those changes before the works are actually taken up for execution, as, otherwise, there will be unnecessary expenditure and loss of time. When the works are actually in progress, no alterations or additions should be demanded as a rule.

(8) The Public Works Department should give very nearly correct figures for administrative approval, to enable the provisions being not vitiated largely.

(9) With regard to 'contribution' works, the works should not be taken up until the funds are made available on the basis of an up-to-date sanctioned estimate. If any deviations are suggested further, unless and until the user has agreed to meet the extra cost, he should be informed that the work is stopped on his responsibility.

(10) There is long delay in the preparation of final bills and in the sending of outlay statements. A procedure should be evolved for the disposal of outlay statements as early as practicable. Normally, an officer should not be transferred till he completes the works and the outlay statements.

(11) Steps should be taken to keep the sanctioning authorities informed of the progress of work from time to time, by sending quarterly progress reports.

(12) The powers of sanction of the Public Works Department officers should be enhanced to the limits noted under the Chapter on 'Powers' in our recommendations.

सत्यमेव जयते

CHAPTER IV.

To suggest measures for the more effective and efficient execution of Plan and other Civil Works in the department at all levels and to make recommendations for the re-organisation of the department either at particular levels or as a whole, as the Committee may find necessary.

33. The second item of the terms of reference is to suggest measures for the more effective and efficient execution of the Plan and other Civil Works in the department and to make recommendations for the re-organisation of the department.

(1) DESIGNS SECTION.

34. We understand that in several instances works are started without correct estimates based on proper designs (technical blue-prints) prepared after minute and detailed investigation. This is mostly due to the work of designing and preparation of plans and estimates being saddled on to the executive staff, who find neither sufficient time nor adequate facilities to attend to this work satisfactorily. Practically their whole time is taken up in executing the works. It is also partly due to the authorities pressing on the executive officers to undertake the works and finish them within a fixed time. This is primarily responsible for (1) the very great divergence between the original estimates and the actual expenditure; (2) the schemes being subjected to frequent changes involving the first, second and third revised estimates; and (3) the delay in the execution of works.

35. The Estimates Committees of the Legislatures of several States (and the Estimates Committee of the former Mysore State, as far back as 1953) have stressed that, if the schemes are investigated in all their details in advance and designs and estimates are prepared on the data obtained, many bottlenecks that occur at present in completing the schemes to the scheduled time and cost will disappear. They have also stressed that this work cannot be saddled on to the normal executive officers and that a separate permanent Design Section should be

established at all levels in the Public Works Department. There are such designs establishments with Superintending Engineers, attached to the Central Office, under different sections such as Bridges, Buildings and Irrigation in Bombay and Madras. The techniques of road making, bridge construction, irrigation, etc., are making rapid strides and it is very necessary to keep oneself fully equipped with current knowledge.

36. We agree entirely with the Estimates Committee that this work cannot be undertaken by the Divisional Officers. We would strongly recommend that a permanent Designs and Investigation Section for all the normal works of the Public Works Department should be immediately opened to carry out a thorough investigation of schemes in advance and to draw up in sufficient detail the plans and estimates.

37. We consider that a Superintending Engineer, with one Executive Engineer and the staff, for *EACH* of the *TWO* Chief Engineers, is permanently necessary. Regarding the Designs Section for Public Health Engineering, we feel (as previously emphasised under the Chapter on Public Health Engineering) that the Section, under a Superintending Engineer—with the complement of staff—may be set up temporarily for a period of five years, to be continued thereafter depending on the workload. The staff of the Sanitary Circle Office, Bangalore, which is proposed to be abolished, may with advantage be utilised for the Designs Section dealing with Public Health Engineering in the Central Office.

38. Regarding the Designs Section in the Circle under the Superintending Engineer, we feel that there is no need for an Executive Engineer under him, but a Technical Assistant with two Supervisors will do, as the bulk of the designing work will have been done at the Central Office or at the Executive Engineer's Office.

39. As the Division is the pivot of the Department, a Design Section—with an Assistant Engineer, assisted by Supervisors and draftsmen—may be permanently established at the divisional level.

For the Survey, Planning and Designs Section to be successful, the staff should be specially chosen and remunerated by suitable special pay.

(2) ESTABLISHMENT OF AN INVESTIGATION UNIT FOR THE PROJECTS COMING UNDER THE THIRD FIVE-YEAR PLAN.

40. We read the letter No. N.R. 8(5) 57, dated the 18th March 1957, from the Secretary, Planning Commission, Government of India, New Delhi, regarding the setting up of an Investigation Unit under the charge of an experienced Superintending Engineer, with the proper complement of staff, for seeing that fully investigated schemes are got ready in time for the Third Five-Year Plan. We agree with the remarks made by the Planning Commission about the schemes based on incorrect data, regarding hydrology, site, availability of man-power, etc. Hence we feel that the subject should receive immediate attention. We were asked to formulate our opinion about the proposals sent up by the Chief Engineer on this subject, and we have sent an interim reply.

41. We have since examined the proposals in greater detail as also the statement of works proposed to be included in the Third Five-Year Plan. We learn that the works in Southern Mysore lie in Kollegal, Coorg and South Kanara, and are mostly of a medium nature. We recommend that one Investigation Circle, with one Division and three Sub-Divisions (one for each of the areas noted above) will be enough. As the irrigation projects are of a medium nature, this Investigation Circle may be placed under the proposed Chief Engineer (Irrigation and Public Health).

42. Regarding the integrated areas in Northern Mysore, there is already a Circle, *viz.*, the Karnatak Irrigation Circle, with the Divisions noted below:—

(1) Ghataprabha Left Bank Canal Division No. 1, Ghataprabha.
(2) Ghataprabha Left Bank Canal Division No. 2, Jamkhandi.
(3) Ghataprabha (Hadalga) Dam Division, Belgaum.
(4) Malaprabha Irrigation Division, Dharwar.
(5) Dharwar Irrigation Project Division, Dharwar.
(6) Dharwar Irrigation Division, Dharwar.

The Dharwar Irrigation Division, with seven Sub-Divisions, is working since three years and has almost completed the investigation of all medium irrigation projects. The other Divisions in the Circle are for the investigation of the Malaprabha and Ghataprabha Schemes. This Circle therefore serves the entire Bombay Karnatak area.

43. We invite attention to paragraph 5 of the Planning Commission's letter referred to above, wherein it is stated that the detailed investigations, surveys and preparation of projects should be taken on hand on schemes that the State may like to suggest for inclusion in the Third Five-Year Plan. We would, therefore, recommend a committee of Revenue and Public Works Department Officers to examine the schemes proposed to be taken up for inclusion in the Third Five-Year Plan and to fix up the priority for these schemes after due consideration of the necessities of the area, etc., so that the investigation may be concentrated and fully investigated schemes may be got ready in time for the Third Plan.

44. With the above consideration, we examined the proposal for another Investigation Division for the integrated areas of Hyderabad Karnatak. The Chief Engineer, Major Irrigation (North), expressed the view that there is need for a Division for the investigation of a good number of medium projects in Gulbarga District. There is already a Project Sub-Division in Gulbarga. A separate Division, with two Sub-Divisions, in addition to the existing Project Sub-Division, may be formed and attached to Gulbarga Circle, with headquarters at Gulbarga.

सत्यमेव जयते

45. We recommend the setting up of one Irrigation Circle, with one Division for investigation (with three Sub-Divisions) with headquarters at Mysore, to be under the control of the proposed Chief Engineer (Irrigation and Public Health), against the two Divisions recommended in our interim reply to Government. Similarly, one Investigation Division, with three Sub-Divisions, for works to be undertaken in the Hyderabad Karnatak area, may be formed and attached to Gulbarga Circle, under the control of the proposed Chief Engineer (Irrigation and Public Health), against the two Divisions proposed in our interim reply to Government.

(3) Survey of Irrigation Tanks in Mysore.

46. From the statement taken from the "Mysore State in Maps", published by the Department of

Statistics, Government of Mysore (Appendix IV-A), we learn that, out of the total irrigated area of the State, *viz.,* 17.5 lakhs acres, 7.75 lakhs acres are irrigated by tanks, against 3.75 lakhs acres by canals and 6 lakhs acres by other sources. Out of the total of 7.75 lakhs acres irrigated by tanks, nearly 5 lakhs acres are in former Mysore area, 1 lakh acres in Dharwar District and the rest in all the other Districts. We are thus made aware of the necessity for keeping the tanks in a fit condition.

We understand that there is no list of tanks made available in the integrated areas, while there is such a list in the former Mysore State, which is not corrected and brought up-to-date and the same figures are continued without further verification. Most of the tanks are in a state of disrepair and disuse. Even the tanks restored fall into disrepair for want of periodical maintenance. We are also aware of the complaint that the area irrigated under each source, as noted in the registers, etc., differs from the area actually under cultivation.

47. For the planning and preparation of correct estimates for any work of improvement, repairs to the existing works, etc., we are convinced that detailed investigation by field survey and collection of correct statistics about the yield, storage and the existing area under cultivation, are absolutely necessary. We have examined the proposal of the Chief Engineer, sent to Government, in his letter No. 2615-16, dated the 12th May 1958, for conducting the detailed investigations with a view to building up a correct record of all irrigation works, so essential in building the basic economy of the country. We feel that the proposal for forming—

(*a*) two Sub-Divisions for each Division in the Bangalore, Kolar, Tumkur, Hassan, Chikmagalur and North Kanara Districts ; and

(*b*) one Sub-Division for each Division in all the other Districts ; with the necessary staff and equipment is quite desirable. We feel, however, that there is no necessity for an additional Sub-Division for Belgaum, as the tank-irrigated area there is very small, and one Sub-Division can well manage the 'Bhandaras' (pick-ups) which are the main irrigation source in that area.

48. We do not consider that any additional establishment to the Superintending and Chief Engineers' offices is necessary, as the work is purely survey work in the districts. As clerical staff is required in the Division to deal with the correspondence, we consider it necessary to sanction one clerk for each of the Sub-Divisions in every Division.

49. We wish to impress the fact that the survey staff should be given a special allowance of 20 per cent in the maidan areas and 30 per cent in the malnad areas, and that the survey parties should be equipped with the survey and mathematical instruments, drawing materials, sectional papers, etc., and one jeep.

50. We recommend that, to assess the work done, the work may be started and completed taluk by taluk. Details of all the irrigation sources such as tanks, pick-ups, feeder-channels, etc., for each taluk should be obtained.

51. We consider that the Chief Engineer should issue instructions regarding the details to be collected and got printed and distributed to all survey parties, to ensure uniformity. We would suggest the columns in the former Mysore Tank Register for adoption.

We consider that the establishment is necessary till the end of December 1960.

(4) SCHEDULE OF RATES.

52. We feel that, to facilitate the preparation of correct estimates and also to serve as a guide for the disposal of tenders and in settling the contractors' claims, etc., the preparation and maintenance of an up-to-date Schedule of Rates cannot be gainsaid.

53. We understand that different systems are in vogue in the different parts of the integrated areas in regard to the preparation of the Schedule of Rates. No system is realistic, as it is not based on the actual labour necessary and the materials needed. A Schedule, to be realistic for each kind of work commonly executed in each Division, should be prepared on the basis of the rates prevailing in each locality separately for (1) material,

(2) labour and (3) completed item of work, based on the standard data for such item. We understand that this has not been done by the Department. We are informed that none of the systems in vogue in former Mysore and the integrated areas is such as to readily incorporate the fluctuating cost of labour and materials. To cite an instance, in Hyderabad Karnatak, a block percentage on group of items is added on to the Schedule of Rates prepared in 1930, which is unrealistic and faulty.

54. We consider that the work of preparing a realistic Schedule of Rates cannot be saddled on to the normal staff. As this is vital for correct estimating, a separate establishment for preparing a realistic Schedule, taking into consideration (1) materials, (2) labour and (3) works, by preparing a rate analysis on the prevailing rates of the above components in the particular locality, may be set up. The rate for a completed work is to be based on the specifications, which have to be revised and rationalised. Special establishment is necessary for this purpose also.

55. Where it is considered necessary to increase or decrease the rate for any item entered in the Schedule of Rates, such increase or decrease should be justified by a proper analysis.

56. We examined the proposal sent up by the Chief Engineer for this work, in his letter No. 30619-20—S.P., dated the 20th February 1958, for the formation of a Division with the staff as noted in Appendix VI-F, and we feel that the strength is adequate and this may be created on a temporary basis for a period of one year under the Chief Engineer.

57. Formerly, the Schedule of Rates was expected to be revised annually and it was to be approved by the Chief Engineer. We recommend that, as in Bombay, it may, in future, be sanctioned by the Superintending Engineer not later than the beginning of January. In order that uniform rates should be applied in a district, the Executive Engineer should hold a conference with the Engineering Officers of other Departments, local bodies, etc., and a consolidated Schedule of Rates should be drawn up, every year. The Schedule of rates should be revised annually till normal conditions are obtained, and once in three years when conditions become normal.

We wish to emphasise that this is vital for the execution of the works and recommend the immediate sanction of the establishment.

(5) ESTABLISHMENT REQUIRED FOR THE ASSESSMENT OF IRRIGATION AND WATER RESOURCES POTENTIAL OF RIVER BASINS.

58. The importance of the assessment of the potential of each river basin in the State cannot be gainsaid. This is very necessary for the preparation of preliminary reports of new projects and also for the evaluation of the potentialities of the existing ones with a view to formulate proposals for improving them, wherever possible.

It is seen that, except for a few stations in the Cauvery basin, gauging stations for the study of the discharge in the other basins such as Palar, Pennar, Chitravathy, Tunga, Bhadra, North Hagary, Netravathi, Krishna and Bheema, do not exist. Situated as Mysore is in the Central Deccan Plateau, such an assessment of the irrigation and water resources potential on a scientific basis is very necessary for solving the problem of the sharing of water between two or more States as well as the disputes arising out of the inter-State river valley projects, which are peculiar to Mysore. The gaugings have to be done for a period of three years as per standard, and for making necessary arrangements before starting the actual gaugings it requires at least one year. Thus the total period for this work will last for four years.

59. The Planning Commission of the Government of India, in their letter No. N.R. 8(5)—57, dated the 18th March 1957, have also stressed the importance of such assessment of water resources available and the need of the region.

60. We entirely agree with their views and consider that the assessment of water resources is of vital necessity, for which gauging work should be undertaken immediately. We recommend the formation of two Divisions with two Sub-Divisions in each, for a period of four years, and the Divisions attached to the Investigation Project Circles.

The details of the staff and equipment required for this purpose are given in Appendix IV-B.

We recommend special duty allowance and tentage equipment for the staff, to enable them to attend to the gaugings at all periods of flow.

(6) EXECUTION OF WORKS.

(i) *System of Work.*

61. At present, there are three systems of work under which the works are being executed in the Public Works Department, *viz.,* (*a*) departmental sytsem, (*b*) piece-work system and (*c*) contract system.

62. *Departmental system.*—In a departmental system of work, though the works are carried out under the direct supervision of the departmental men, there is one major defect, *i.e.,* the system of accounts does not reveal the correct position of the expenditure or the working rate of the items of work for a long time and even after the completion of the works, as the materials obtained will be under a 'Suspense Account'. We do not, therefore, favour the departmental system of work, and this system need not be resorted to unless it is unavoidable.

सत्यमेव जयते

63. *Piece-work system.*—Regarding the piece-work system, though it has the advantage of the claims being settled then and there, it needs additional staff to prepare the bills of several piece-workers as well as to supervise the work. We recommend that this piece-work system be restricted to such cases where large resident supervisory staff is employed and where close supervision is possible, and be limited to works costing not more than Rs. 10,000. We consider that this system will be useful in the case of earth-works in canals, etc.

64. *Contract system.*—The next system is the contract system, and this is recommended for all works above Rs. 10,000, and even for works costing less than Rs. 10,000. This system will not only minimise the number of bills and reduce the supervisory staff, but also ensure keeping up to the time-table.

65. There is another system prevalent in Bombay, called the '*rate-list*' *system*, wherein a rate is called for for the different items of works in the case of works of small magnitude of a recurring nature. This is done in the latter part of the year previous to the year in which the works are to be undertaken. This system is limited to awards costing not more than Rs. 2,000 and the works are thus distributed. We consider that this system may, with advantage, be introduced in the State for the annual repairs of buildings, channels and roads. This will also build up a team of small contractors, who will be available for emergencies.

(ii) *Contractors.*

66. We next considered the classification and registration of contractors on the basis of money value. They may be classified as "A", "B", "C" and "D" class contractors and may be brought under the following categories :—

Class	*Works costing*	*Should have under them*	*Deposit*
"A"	Rs. 5 lakhs and above.	Experienced Engineer	Rs. 50,000
"B"	Rs. 1 to 5 lakhs	Experienced Engineer	Rs. 10,000
"C"	Rs. 20,000 to 1 lakh	Experienced diploma-holder	Rs. 5,000
"D"	Below Rs. 20,000	....	No deposit

They should register themselves by paying a fee of Rs. 75 in the case of "A" and "B" class contractors, and Rs. 50 in the case of "C" and "D" class contractors. The jurisdiction for the "A" and "B" class contractors should be the whole State, that for "C" class contractors the Circle, and that for "D" class contractors the Division.

67. We feel that contractors who misbehave and whose actions are questionable should be blacklisted, and a set of rules regarding blacklisting should be framed and made available to the officers.

68. We feel that the system of calling for tenders should continue even after the registration of contractors to have competition.

69. Though, as a rule, no advances can be paid to the contractors, we recommend that, in special cases of big works where there is locking up of large sums, the system of giving secured advances to the contractors, as in vogue in Bombay and Madras, may be introduced here, so as to secure the progress of work. The indenture agreement, as noted at page 295 of the Bombay Public Works Department Manual—Volume II—may as well be adopted for this purpose.

70. We consider that the phasing of the programme of works should be done and the necessary grants made available in the budget, before the contract is fixed, to enable the contractor to make the arrangements on the one hand, and to avoid the stopping of works in the middle for want of grants, etc., and to strictly enforce adherence to the time schedule by the contractor, on the other.

71. In the case of any disputes between the Department and the contractor, three methods of arbitration were suggested, *viz.*—

(1) Having a Superintending Engineer, other than the Superintending Engineer under whom the work is executed, as arbitrator. [Contractors say that this is entirely one-sided.]

(2) Having one officer from the department, one selected by the contractor, and the third an independent man.

(3) Having a board set up for the purpose, consisting of the Secretaries to Government in the Finance, Legal and Public Works Departments and the Chief Engineer.

We have also learnt that items (1) and (2) were contested in a Court of law. We therefore feel that the legal opinion on the three alternatives suggested above may be obtained before adopting any of the systems.

72. We discussed at great length the vexed question regarding the settlement of contractors' claims. We find that both the departmental officers and the contractors are responsible for the delay in settlement. The delay in payment to the contractors is generally due either to

the deviations or additional works done being not sanctioned from time to time, or to the delays in decisions regarding the rates for items not contemplated originally. We suggest the following remedies :—

(1) The system of contractors maintaining an order book for the recording of any orders regarding deviations, etc., should be enforced. The contractor should, within a week from the date such deviations or additions are ordered, inform the Executive Engineer about the details of the rates, etc., without which any claim for additional payment should not be considered.

(2) It was the considered opinion of the officers interviewed by the Committee and those who had replied to our questionnaire, that the blame for the non-settlement of claims of contractors is to be shared by the officers at all levels. What is needed is the timely sanction of works by the officers as per the codal rules. The officers should:

(*a*) see that no deviations are made without obtaining the *sanction in writing* from the competent authority ;

(*b*) ensure that the work-slips as per codal rules are sent up, when they anticipate any excess over 5 per cent ;

(*c*) settle, within one week, regarding the rates claimed in writing by the contractors for additional items of works, etc. ; and

(*d*) treat all additional works as a supplementary estimate, sanction to which should be obtained, within a fortnight, from the authorities, instead of including them as an item in the revised estimate.

(3) The Superintending Engineers and higher officers should, during their inspections, make it a point to hear the petitions from the contractors and decide the issues on the spot or take prompt action to issue definite orders on the points raised after obtaining competent approval.

(4) The data rates worked out for items other than those in the Schedule of Rates, should be settled by the Superintending Engineer, instead of the Chief Engineer.

(5) Lastly, we do feel that the Executive Engineer should submit a return, containing the list of pending claims, once a month, *without fail*, to the Superintending Engineer, who, in turn, should take immediate action suitably to settle the claims. The Chief Engineer should call for a list of pending claims, month by month, and this should form a monthly return to be submitted to Government.

(iii) *Tenders.*

73. We were informed that in the system of publication of tender notifications in the *Mysore Gazette*, there was no good response from the contractors, as the notifications would not reach all the literate as well as illiterate contractors well in time, and that, to get better response, the system of publishing the tender notifications in the newspapers was adopted. 'Chit Tender' notifications, as in Madras and Bombay, may be published in the papers. To have uniformity, we would recommend the following:—

(*a*) Works costing Rs. 10 lakhs and above should be advertised in all the important newspapers in circulation in South India, *i.e.*, "The Times of India", "The Hindu", "The Indian Express" and the "Deccan Herald".

(*b*) Works costing less than Rs. 10 lakhs but above Rs. 50,000 may be advertised in the local newspapers.

(*c*) Works costing less than Rs. 50,000 may be notified by the Executive Engineer.

(*d*) The system of advertising in the *Mysore Gazette* (not in the detailed way, as at present, but only 'Chit Tender' notices) may be continued.

After some discussion regarding the receipt of tenders, the general feeling of the Committee was that the tenders received late should not be taken into consideration except as provided in the Public Works Department Code.

We do not recommend the quotation on a percentage basis, even for road works.

74. We discussed the procedure in vogue regarding rejection of the lowest tender. Some Members were of

the view that the person next above in authority could accept a tender other than the lowest tender, while some others were of the opinion that " Tender Committees ", as in vogue in Bombay, at the Chief Engineer's, Superintending Engineer's and Executive Engineer's levels, may be constituted. After discussion, the majority of the Members were in favour of having Tender Committees, as in Bombay (*vide* Bombay P.W.D. Manual—Vol. I, Page 190).

(7) WORK-LOADS AND ESTABLISHMENT CHARGES.

75. The work-load of a Division varies from 30 to 35 lakhs of rupees (*vide* graphs at Appendices II-O1 and O2), on an average for the entire State, and that for a Sub-Division from Rs. 5 to 7 lakhs. This may be applied generally as a yardstick for normal conditions of work where maintenance and capital works are balanced. In some Divisions, due to the large proportion of capital works, the annual work-load may be higher and in other cases where the maintenance works predominate the work-load will be less. In any case the average of Rs. 30 to 35 lakhs may be applied as being the normal average work-load of a Division. Where work-loads are heavy, generally, only senior Executive Engineers may be posted to those Divisions.

76. The establishment charges for large capital works concentrated in one place will be less than for scattered works of maintenance, and the percentage of establishment on works expenditure may be fixed so as not to exceed 8 per cent for purely capital works and 12 per cent for normal works, the latter applying to the regular Divisions and the former in the case of project works. These are the maximum upper limits.

77. It is desirable to post only senior Executive Engineers for charge of heavy Divisions like Bangalore, Tumkur, Kolar and Belgaum.

(8) RECRUITMENT.

(*a*) *Recruitment of non-Gazetted Staff.*

78. All the officers that were interviewed by the Committee and many retired officers have stressed the

necessity for a re-orientation of the policy of Government with regard to recruitment, in view of the expanding activities of the Department and in view of the fact that many persons are seeking service elsewhere due to the delay in the procedure of recruitment through the Public Service Commission, and also in view of the communal ratio especially in regard to the technical staff. The problem has been aggravated due to the different climatic conditions prevailing in the merged areas, and often candidates from one area are disinclined to join the new place of service, especially in the case of ministerial staff. They all advocated that recruitment to all the non-Gazetted ranks, ministerial and technical, may be made by the Head of the Department, without reference to the Public Service Commission, as in Bombay. In fact, in Bombay, the Superintending Engineers have been given the powers of recruitment. The general feeling of the Committee is that this method would conduce to better efficiency and will ensure the quick filling up of vacancies. The necessity for such quick filling up of vacancies arises when projects get sanctioned. This is a special feature in the working of the Public Works Department. The Head of the Department will observe all the specific rules that are being followed by the Public Service Commission in this regard, the sole intention in excluding this recruitment from the purview of the Public Service Commission being to eliminate the delay that is entailed in having the recruitment through the Public Service Commission.

Shri Veeraraj Urs and Shri Vasudeva Rao stated that, though they appreciated the difficulties mentioned above, it would be against the general method of recruitment adopted for all the Departments. After a good deal of discussion, it was resolved as under :

> *" The Committee would like to invite the attention of Government and the Public Service Commission to the very serious handicaps that are facing the Public Works Department because a large number of vacancies—both in the technical and clerical staff —have not been filled for want of lists of candidates approved by the Public Service Commission. The device of appointing local candidates is entirely unsatisfactory because, sometimes, after putting in a service of one or two years, these candidates, feeling a sense of insecurity, resign and leave the work, or*

they will be thrown out by the appointment of candidates from the approved list. The Heads of Departments may be requested to anticipate their requirements as far as possible well in advance, and a waiting list of candidates approved by the Public Service Commission should be obtained in advance from time to time. The Public Service Commission may be requested kindly to so arrange that candidates are interviewed soon after the University and technical examination results are out, so that, once the candidates are regularly recruited, they will have a sense of security, and public work will not suffer for want of officials who have been regularly recruited and who can look forward to a career of public service. The Committee would urge both the Government and the Public Service Commission to give high priority to the filling up of vacant posts, as, otherwise, the targets set before the Public Works Department will suffer in spite of all efforts. The lack of security for the local candidates has been one of the main causes for the lack of progress and satisfactory work. The Committee also feels that these lists have to be reviewed periodically, since candidates on the approved lists who do not get appointed within some specified time are likely to seek jobs elsewhere and the old lists may not be of much use."

(*b*) *Recruitment of the Gazetted Staff.*

79. All the officers that were interviewed by the Committee were definitely of the opinion that the system of appointing probationers, in the manner so far done in Mysore, is not in vogue in any of the other States, and that this has demoralised and has largely contributed to the inefficiency and discontent in the staff, and they urged that this may be done away with. In fact, the general feeling was against direct recruitment to the Gazetted ranks, and the system of filling 50 per cent of the vacancies by direct recruitment and 50 per cent by promotion was nowhere adopted in any of the Departments. Shri Veeraraj Urs suggested that the ratio of 1:3, *i.e.*, one by direct recruitment and three by promotion, was reasonable.

As an encouragement to marked ability and in order to have men who have some years' service for the top posts, it was felt that direct recruitment may be necessary; but that it should be restricted to a very limited number. The system of recruitment by only interviewing the candidates, as now adopted, has not achieved the desired result. In the course of our tours, we were told that, in Bombay, direct recruitment is limited to three or four, and that too selected by a written examination. *After a good deal of discussion, it was resolved that the recruitment to the Gazetted cadre should be in the ratio of* 1:3 (i.e., *one by direct recruitment and three by promotion) and should be by written examinations and* viva voce *conducted by a Board of Examiners constituted by the Public Service Commission, as was being done in the selection of probationers to the Assistant Commissioners' cadre in the former Mysore Civil Service.*

80. In the integrating States, except in erstwhile Mysore, the Certificate and Diploma-holders have the chances of getting promotion to the Gazetted ranks of Assistant Engineers. For want of a definite policy governing the promotion to the cadre of Assistant Engineers in the New State, the prospects of non-graduates coming from the other States are jeopardised. It is, therefore, necessary to fix at least 10 per cent of the 'promotion' vacancies of Assistant Engineers for this class of officers who get qualified for the Gazetted rank by passing a departmental examination, the syllabus of which may be drawn by the Committee of Chief Engineers.

(*c*) *Promotions.*

81. In the case of Junior Engineers (*i.e.*, graduate Engineers), promotions to the Gazetted ranks should be by seniority and we feel that on no account should there be again a question of representation. Regarding promotion of the Subordinate Engineers, Overseers, Sub-Overseers, etc., (now classed under one head 'Supervisors') in a running grade, the best system, in our opinion, is the one prevalent in Bombay, *viz.*, based on the recommendation report, classified "A", "B", "C1", "C2", "D" and "E", as per paragraphs 18, 19 and 22 under 'Establishment—(c)—Promotions', in Volume I of the Bombay Public Works Department Manual.

(9) PAY SCALES.

82. The re-organisation of States has, in its wake, created a lot of problems in regard to 'Services'. The scales of pay in all the merged States are higher than those obtaining in the former Mysore State. The States Reorganisation Committee, in their report on the integration of services, have enunciated that it will not be possible to bring down the scales of pay of officers coming from Bombay and Hyderabad to the level of the Mysore scales of pay.

83. The main observations of the Committee headed by Shri V. M. Mascarenhas, constituted by the Government of Mysore in 1956 before the reorganisation of States, are: "We have not taken into consideration the full implications and effects of the formation of the New State, as it is too early to do so. . . . As in all probability, Bombay scales will have to be continued in respect of officers coming into the New State from that State, it will be necessary to adopt similar scales of pay and allowances to all classes of our officers also. It is our earnest desire that officials who have already sacrificed and given their best to the progress of the State, should not suffer in either seniority, status or emoluments and their interests should fully be safeguarded at the time of integration." What is actually done in the integration of services and fixing relative ranks is not in accordance with the desire expressed by the Mascarenhas Committee. If the State had upgraded the Mysore scales of pay and brought about uniformity in the integrated State, it would have been in accordance with the desire expressed by the Mascarenhas Committee and would not have given room for the great discontent prevailing among the erstwhile Mysore officers.

84. It would be fitting and compelling that the question of pay scales, in the face of apparent disparity, is examined by this Committee and recommendations made, so that the officers and the staff of the department are contented and every effort is made to maintain equity and fairplay without undermining efficiency.

85. Appendix IV-D gives the scales of pay of the officers of the Public Works Department in Madras, Bombay and Hyderabad areas. It is seen that the Chief

Engineer, according to the present scale in Mysore, gets Rs. 1,200 in the grade Rs. 1,200—50—1,500, while the graded pay of a Superintending Engineer in Bombay is Rs. 1,300—60—1,600. It is interesting to note here that, the pay of the Chief Engineer in erstwhile Mysore was fixed at Rs. 1,400 and when it was necessary to upgrade the same, the pay of Rs. 1,200—50—1,500 was approved by the Government. This, in fact, lowers the long-standing minimum pay of the Chief Engineer of Rs. 1,400. This is no improvement at all. Recently, some Executive Engineers of Bombay Karnatak who were drawing Rs. 650 when they were promoted as Superintending Engineers, straightaway got into the grade pay of Rs. 1,300—60—1,600, while their Chief Engineer in Mysore is in the lower grade of Rs. 1,200—50—1,500. This will repeat even in respect of many more officers from Bombay area, who are yet Executive Engineers. In several instances, while the erstwhile Mysore Executive Engineers after a service of 25 to 30 years, on promotion as Superintending Engineers, get Rs. 800 in grade of Rs. 800—40—1,000—50—1,200, those from Bombay with hardly 15 years of service get promotions and straightaway reach the graded pay of Rs. 1,300—60—1,600. Such disparity in the pay scales of the same class of officers discharging the same kind of duties under one and the same Government and having identically the same status and responsibility, will affect the morale in the Department.

सत्यमेव जयते

86. Dealing first with the Chief Engineers, it was explained that, though the Chief Engineers were formerly classified as first-class heads of departments along with the Revenue Commissioner and Chief Secretary, their position had now been lowered, and the pay scale reduced and brought down to the level of other heads of minor departments, while the pay scales of some heads of departments have since been upgraded. The general feeling of the Committee is that the Bombay scales should be given to the Chief Engineers and the Superintending Engineers. Shri Veeraraj Urs, however, pointed out as under :

> " Immediately after the reorganisation of States, the pay scales of both the Gazetted and non-Gazetted officers of all departments were revised, taking into account the pay scales prevalent in all the integrated areas. In the ordinary course,

it would not be reasonable to ask for any revision of the pay scales so soon. There is no doubt that there have been anomalies in the pay scales of officers in the department, consequent on the reorganisation of States. These anomalies are not peculiar to this Department, but they exist in most of the other departments also. Hence, this matter will have to be considered as a general matter and a policy decision will have to be taken by Government. It is ascertained that, in the case of some heads of departments the pay scales have been further revised. Therefore, I feel that the pay scales of the Chief Engineers may also be reconsidered in the light of the revision of the pay scales of other heads of departments. However, having regard to the fact that the officers from the Bomaby area who are promoted as Superintending Engineers are in the grade of Rs. 1,300—60—1,600, and also the fact that the Chief Engineers of the former State of Mysore were getting a salary of Rs. 1,400 fixed, I am of the view that the Chief Engineers of the New Mysore State may be recommended to be given a pay scale of Rs. 1,300—60—1,600. As regards the Superintending Engineers, the revised scale of pay is Rs. 800—40—1,000—50—1,200, and the scale of pay of the Executive Engineers is Rs. 550—860. In view of the fact that the minimum of the Superintending Engineer's scale is lower than the maximum of the Executive Engineer's scale and the scale of pay of the Superintending Engineers from the integrated area is higher than the revised scale, I am of the view that the scale may be fixed at Rs. 1,000—50—1,200."

87. *After some discussion, the Committee felt that the pay scales of both the Chief Engineers and the Superintending Engineers may be revised, as recommended in the concluding paragraph in this Chapter.*

As regards the pay scales of Executive Engineers and Assistant Engineers there is not much disparity in the scales of pay in the different States. Hence the present scales of Mysore may be continued.

88. With regard to the Supervisors, who are Engineering graduates, the existing scale of pay, *viz.*, Rs. 150—10—300 (Rs. 125 on probation), is not attractive, so

much so that hands for filling the posts are not available in adequate numbers. In other States, a higher starting salary is being offered in view of the great dearth of technically qualified graduates in both the public and private sectors to man the large number of posts created for implementing the Plan Projects. Government in their recent Order No. F.D. 271—R.O.P. 58, dated Bangalore, the 29th April 1958, have sanctioned a starting pay of Rs. 150 on probation for one year and thereafter given Rs. 170 in the grade of Rs. 150—10—300. The general feeling was that this was not sufficiently attractive and that they should be started on Rs. 180 in the same scale. Shri Viraraj Urs stated: "Because the scales of pay offered in other States are more attractive, the Supervisors give up our service and seek jobs elsewhere. As a sort of inducement, we may give them a higher starting pay. I have no objection to the Supervisors being given a starting pay of Rs. 170, but the probation period of one year must be there. They may be fixed at Rs. 180 after completing the period of probation." After some discussion, the Committee agreed with the above view.

At present, Engineering graduates in the non-Gazetted ranks have different designations in the integrated States. To have uniformity, we recommend that they be designated as Junior Engineers, to be in keeping with their qualifications and status.

सत्यमेव जयते

89. Coming to the Executive subordinates with recognised Certificates and Diploma qualifications, in Bombay they are designated as Overseers and recruited directly as such in a running grade of Rs. 80—5—100—8—140—10—200—10—270, while in Hyderabad and Mysore a similar scale of pay is split up into two or three cadres starting as Sub-Overseers in the pay scales of Rs. 90—3—105—3½—140 and Rs. 70—5—90—6—150 in Hyderabad and Mysore respectively. The next higher grade is called 'Overseer' and is a promotional cadre. That carries the pay of Rs. 140—4½—176—6½—250—8½—300 in Hyderabad and Rs. 120—10—200 in Mysore. Again, in Mysore the next higher grade, known as Sub-Engineer, is also another promotional cadre, having a pay of Rs. 150—10—250. Government have, in their recent Order of the 29th April 1958, sanctioned a starting pay of Rs. 70 on a probation of one year, and thereafter

given Rs. 90 in the grade of Rs. 70—5—90—6—150—10—180.

While a person recruited on the initial pay in Bombay service can, in the normal course, expect to reach the maximum of the running grade, *i.e.*, Rs. 270, his counterpart in Mysore has to take his chances of promotion in two stages. In the equating of posts for fixing inter-State seniority, this handicap has caused great hardship to the former Mysore Sub-Overseers and Overseers. Representations have been received from the Mysore Engineering Service Association in regard to the great injustices caused to them in equating the posts while fixing their ranks. The Sub-Overseers, Overseers and Sub-Engineers form the back-bone of the department, and therefore their grievance deserves serious consideration and alleviation. The Committee feels that, in view of the fact that the nature of work entrusted to the above three categories of Executive officials is almost the same, a running scale of pay, as in Bombay, may be introduced and the three separate cadres abolished. We recommend that a common scale, *viz.*, Rs. 70—5—90—6—120—10—250, may be given to Sub-Overseers, Overseers and Sub-Engineers, and all these cadres amalgamated into one with the designation of ‘Supervisors’. They may be started on Rs. 90 in the grade with a probation for a period of one year.

90. *After taking into account all aspects of this question, complicated as it has become after the integration of States, and with a view to ensuring the efficient and economical execution of works as well as the satisfactory discharge of the onerous duties devolving on them and the smooth working of the Department, we recommend as follows:—*

(1) *The pay scale of the Chief Engineer may be fixed at Rs.* 1,500—75—1,800, *and that of the Superintending Engineer at Rs.* 1,000—50—1,200 *as in Madras.*

(2) *The Engineering graduates may be started on a pay of Rs.* 170 *in the grade of Rs.* 150—10—300, *and after the completion of the probation period of one year they may be given Rs.* 180 *and designated as Junior Engineers.*

(3) *The three cadres of Sub-Overseers, Overseers and Sub-Engineers, may be merged and a common running*

grade of Rs. 70—5—90—6—120—10—250 *given to the Certificate and Diploma-holders, and they may be started on a pay of Rs.* 90 *in the scale, and be designated as 'Supervisors'.*

(4) *To have uniformity in the designations of the Gazetted officers in the Public Works Department all over the State, officers in charge of Circles, Divisions and Sub-Divisions may be designated as Superintending Engineers, Executive Engineers and Assistant Engineers respectively.*

(5) *The procedure of posting Supervisors or Junior Engineers for charge of Sub-Divisions or to the Gazetted posts of Assistant Engineers and designating them as Sub-Divisional Officers, has a demoralising effect, and may be therefore stopped immediately. They should be promoted as Assistant Engineers only and there should be no nomenclature of "Sub-Divisional Officers".*

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CHAPTER V.

The fourth term of reference is to recommend measures for securing prompt and correct accounting of transactions of the department at various levels and towards that end to propose such re-organisation of the accounts set up in the department as may be considered necessary.

(1) ACCOUNTS.

91. We invited the suggestions of the Accountant General, Mysore, for changes in the system of accounts. Based on the reply received from him (Appendix V-A), a questionnaire was issued to the Chief Accounts Officer and the Financial Assistant to the Chief Engineers [Appendix I-C(3)]. We discussed this subject with these two officers. We had also the benefit of the views of Shri P. V. R. Rao, Chief Secretary to the Government of Mysore, who has rich experience on this subject.

Formation of a separate Accounts Department under the Controller of State Accounts.

92. We understand that the control of the Accounts staff and accounting was transferred in 1953 to the control of the Chief Engineer, who was assisted by the Chief Accounts Officer and the Financial Assistant. (Both these officers were deputed by the Controller of State Accounts.) Though this office was formed in 1953, the duties of the Chief Accounts Officer and the Financial Assistant have not been defined to this day. From the Accountant General's letter and from the move of the Government to modify this system, we conclude that the system under the Chief Engineer has not worked satisfactorily.

We are unable to accept the argument that has been advocated by the Accountant General, that the efficiency in accounting could be achieved only if his office has supervisory control over the cadre of Divisional Accountants. Even now, the conditions of accounts in the merged areas (where the control over the Divisional Accountant continues to vest with the Accountant General) continue to be unsatisfactory. Nor are we convinced that these conditions would improve by transfer of only the Accountants to the control of the Controller of State Accounts. The Accounts clerks would, under this arrangement, be under one administrative officer, while the Accountant who has to control and get the work from them would be under another administrative officer. We feel that this arrangement would not improve matters. The idea behind these changes, is, that the entire Accounts staff of the Division should be independent of the head of the spending Department, *i.e.*, the Chief Engineer. The views of Shri P. V. R. Rao, Chief Secretary to the Government of Mysore, in this regard are clearly noted in Appendix II-C.

93. After careful consideration, we recommend that the entire Accounts Section of the Department may be transferred to the Controller of State Accounts. The Chief Accounts Officer, who deals entirely with the Public Works Department accounts, will then work in the office of the Controller of State Accounts. The State Controller will then relieve the Executive officers to an appreciable extent of the responsibility of accounting.

94. We consider that a Financial Assistant is necessary for the Chief Engineer to deal with procedural matters and budgeting. The proposed set-up will be similar to the system prevailing in the Electrical Department, with this difference that this is a pre-audit system, while the Public Works Department system will continue to be a post-audit one.

,As the compiled accounts have to be sent to the Accountant General, Government may, after due consultation with the concerned authorities, define the relations between the Controller of State Accounts, the Executive and the Accountant-General, for the submission of the accounts, returns, etc.

95. Before dealing with the unsatisfactory conditions of accounts and the delay in the submission of returns, as noted by the Accountant General, " a system will have to be devised to enforce, without circumspection and delay, the duties of the Divisional Accountant in the maintenance of accounts and in the submission of returns to Audit ". We consider that the Accountant should

not be the Manager of the Division, as at present, but he should look to the accounts side only. The Head Clerk of the Division should look after all correspondence and deal with establishment and routine matters. He shall refer the papers necessary for audit and accounting to the Accounts Section. The Accountant should attend only to the accounts and the insistence of the necessary returns from the executive officers for the compilation of accounts and returns. The officers, interviewed by the Committee, desired that the strength should be augmented in each Division. We see the force of this argument and consider that there should be, besides the Accountant, two First Division Accounts Clerks—one for the compilation of accounts and attending to returns, and the other for cash and payments; two Second Division Clerks—one for store accounts and the other as reserve. There should be as many Second Division Accounts Clerks in the Division office as there are number of Sub-Divisions. Further, as the initial accounts are to be from the Sub-Divisions, the officers should have intensive training in accounts, at least for one month, and this may perhaps be arranged in batches.

AUDIT OBJECTIONS.

(i) *Reconciliation of the treasury accounts.*

96. We agree with the Accountant General's view that personal reconciliation, once a fortnight, by sending a person to the Treasury, will rectify misclassifications. We learn that there are two remittance heads in the treasury, *i.e.*, 'Remittances by Public Works Department officers' and 'Remittances adjustable by Public Works Department'. We feel that, if there is only one remittance head, it may simplify matters. Similarly, if all remittances to the Public Works Department are made in pink-coloured (or any other definite colour) chalans, as suggested by the Accountant General, reconciliation will be rendered easy.

97. We understand that the Accountant General is insisting that the arrears in respect of schedules of settlement with the treasuries are to be cleared from 1952. As the preparation of the schedule from 1952 involves considerable time, it would not be advisable to keep back

the current schedules till the previous schedules are prepared and brought up-to-date and then linked with the current schedule. The Accountant General may be persuaded to agree to the previous figures being left over at a particular period and to the current schedules being prepared with that opening balance, which can be corrected later on, when the previous schedules are brought up-to-date.

(ii) *Standard Objections.*

98. The standard objections generally relate to want of estimate, excess over estimate, want of appropriation and excess over appropriation.

(*a*) We feel that the last three objections can be easily avoided as these are entirely due to the non-preparation of correct and detailed estimates after careful investigation and survey, as well as the non-chalking out of clear time tables or the phasing of programmes for the execution of the works, with the total outlay, *i.e.*, in short, the failure to prepare a complete blue-print before starting the work. Regarding the first objection, *viz.*, excess over estimate, we consider that it is entirely due to the inaction on the part of the officers to take immediate action for getting the necessary sanction. Strict disciplinary action to see that the codal rules are rigorously followed is, we feel, necessary.

(*b*) Regarding the want of estimate, no work should be started without the estimate and appropriation. The Accountant General has pointed out that a good number of objections pertain to want of estimates in respect of annual repairs of buildings. To simplify this work we suggest that lumpsum amounts may be fixed by the Chief Engineer for the annual repairs of each building, after due consideration of the conditions and the percentage allowable. The Estimates may thereafter be approved by the competent authority. A similar system may be adopted for roads and channels also. The lumpsum estimates will be operated upon up to the amount allotted. The Superintending Engineers in Bombay have powers to fix up amounts up to Rs. 2,500.

(*c*) Standard measurement books for buildings should be introduced within one year by making special efforts at the district level, and this will avoid a lot of scriptory work. Bills prepared as per standard measurement books should be made the rule rather than exception. The rules regarding the preparation of measurement books, etc., are noted in paragraph 182 of the Bombay Public Works Department Manual.

Preparation of Bills and abstract of measurements.—We do not favour the removal of the system of triplicate bills as suggested by the Accountant General, and the system in vogue may be continued. But we entirely agree with the Accountant General that it should be insisted that the abstract of measurements at the end of the measurement book should be written up, as this will enable the rechecking of entries, etc.

Payment of all bills by the Sub-Division Officers.—We do not agree with the suggestion of the Accountant General in this behalf, as the quantum of work is not reduced and the transmission of bills from Sub-Division to the Division and from the Division to the Sub-Division entails delay.

Arrears and irregularities observed in the Audit and Inspection Reports.—Arrears have accumulated over long periods. We suggest that a committee—consisting of the concerned Chief Engineer, the concerned Superintending Engineer and the Chief Accounts Officer--should be formed to review, such cases, once a quarter and to recommend to Government the waiving of minor objections and irregularities of a technical nature, and to take such other measures as they deem fit in the case of serious irregularities.

(iii) *Store Accounts.*

99. We are informed that the store accounts are in confusion in all the Divisions and that this is entirely due to the inexperienced Second Division Clerks maintaining the store accounts. The following recommendations are made in this behalf :

(*a*) After consideration of the cadres and staff in the other States, we suggest the creation of a separate cadre of store-keepers, to see that only qualified men with knowledge of store accounts are entertained for this work. (We have dealt with this subject separately under the Chapter dealing with stores.)

(*b*) We suggest that no materials which could be generally procured in the bazaar should be stocked for being supplied to contractors. Only articles like cement, steel, etc., which are not procurable in the open market should be stocked. This will reduce the quantity and number of items.

(*c*) We suggest that the system of credit sales of stores to the contractors, as in vogue in the integrated areas, should be changed over to the cash sale system as in former Mysore, which reduces the confusion in accounts. Only in very special cases recommended by the Chief Engineer should the system of credit sales be resorted to, with the approval of Government.

(d) Reconciliation of the book and actual balances.—Large differences are observed between the book and actual balances and they are continued in the books, as efforts to reconcile the differences have not borne result, due to the non-availability of records. We suggest that, on a fixed date, the stores of each Division should be counted by a Gazetted Officer (preferably of another Division) and that the actual physical balance, as counted, taken as the book balance and the account continued so that the difference could be allocated to different periods and individuals. Regarding the reconciliation of differences, we suggest that a special staff consisting of one stock-verifier and two clerks may be sanctioned for every two Divisions (heavy) and for every three or four divisions (light), for a period of one year. The staff should be asked to forward the final report within a period of three months for each Division. Where definite responsibility cannot be fixed, the difference should be reported and written off as per powers vested in the officers.

(*e*) *Unserviceable and obsolete materials.*—We are informed that these run in accounts for a long time and demands for the increase of stock-limit arise every year. We suggest that a committee of three Engineering officers should be created to examine the condition of these articles and to make definite recommendations for their disposal.

(*f*) *System of channelling the purchases for works through 'Stock'.*—As per the rules in force, we learn that the articles purchased for a specific work are debited to the account of the work and when purchases are made for a general purpose they are debited to 'Stock'. This has resulted in lack of control over the receipt and issue of materials, as the materials-at-site account is not properly maintained and scrutinised. We suggest that all purchases, except those that cannot be stored, should be taken to ' Stock ' and, when issued, they will be charged off to the works through ' Stock Issues '.

(*g*) *Miscellaneous advance schedule.*—By debiting the dues from the Municipalities and other local bodies to their loan accounts, we feel that the bulk of the miscellaneous advances could be cleared. We learn that a small committee has been formed by Government recently to find out ways and means of solving the problem. We suggest that Government may take early decision.

Stock Verifiers.

100. As it is considered that the verification of stock is a work of utmost importance, we feel that posts of Stock Verifiers are necessary. We therefore suggest that the Stock Verifiers should be sent to Divisions by rotation, so that a Stock Verifier who has conducted the verification in a Division in a year should not do the verification work of the same Division in the subsequent year. This ensures efficient and better check.

Supply of stationery and forms.

101. Inadequate and non-supply of the required stationery and forms are general complaints and we have therefore dealt with it separately. We feel that the proposals made therein will solve this difficulty.

Minimisation of scriptory work.

102. We suggest the following measures to minimise scriptory work :—

(*a*) The Suspense Schedule, which is now a monthly return, may be made an annual return, to be sent with the March Final accounts. For the remaining months, the details of the current items only may be sent with one total for the unaffected items.

(*b*) All works costing Rs. 5,000 and below may be treated as petty works and schedule dockets need not be sent in respect of these works.

(*c*) The submission of contractors' ledgers with the monthly accounts may be dispensed with and the Accountant General may be requested to inspect them during audit.

Realistic dates for the submission of returns.

103. We suggest the following dates for the submission of the returns noted against each :—

(*a*) The date for the submission of the Schedule of Rent Recovery should be changed to the 20th of the month, instead of the 7th as the rent deduction statements will not be received before that date.

(*b*) Treasury reconciliation statement may be sent on the 16th of the month following the one to which the transactions relate, as the transactions of the month cannot be sent the same month.

Facilities to be afforded.

104. It has been brought to our notice that a duplicator, if supplied, to each Division, will help in getting the orders communicated promptly to all officers.

(*a*) An attender solely to keep the accounts and voucher bundles duly stitched ; and

(*b*) One typist for the accounts section.

Regarding the duplicators, we feel that these may be supplied to the Divisions, as this will facilitate the copying of the forms that are prescribed by the Government of India and the State from time to time, etc. As regards the attender and typist, this has been discussed under the Chapter dealing with Establishment.

Copies of Government Orders should be supplied to all officers, as in vogue in the merged areas, which will keep every officer well informed of the Government Orders.

We have discussed the subject in great detail and recommended certain measures to avoid continued objections of the same nature by the creation of *ad-hoc* Committees. We feel that strict disciplinary action should be taken to see that the Technical Officers adhere to codal rules and give proper attention to the maintenance of accounts. We recommend an *ad-hoc* Committee consisting of the Chief Accounts Officer, one of the Superintending Engineers of the Central office and the Superintending Engineer of the concerned circle to discuss outstanding objections every six months regularly and forward reports for suitable action.

Vigilance Squad.

105. Several schemes costing huge amounts are undertaken by the Government, for instance, under the Second Five-Year Plan. The Committee feels that surprise checks of the works in progress should be made by a Vigilance Squad consisting of an eminent Engineer and an Accounts Officer on the lines of the Vigilance Squad reported to have been constituted by the Central Government for the Railways. The eminent Engineer, referred to above, should be of or above the rank of a Chief Engineer.

(2) STORES.

(a) *Central Stores.*

106. We consider that there is need for a Central Stores to pool up and acquire the stores needed by the Divisions and to supply materials and tools and plant to the various Divisions. We further consider that the organisation and set-up of the Central Stores should be as per the Central Stores of the Electrical Department. We learn that the Central Stores of the Public Works Department, which was formed in 1950 for this very purpose, is not functioning effectively. This should be looked into and the set up completely reorganised with regard to staff, storing of materials and accounting, on the basis of the Central Stores of the Electrical Department.

We are aware that there is a Stores Purchase Committee to deal with all the purchases required by all Government departments including the Public Works Department. The officers of the Public Works Department do not, however, favour this purchase through the Stores Purchase Committee, as delay is inevitable in such a system of consultations and re-consultations between the Head of the Department and the Secretary, Stores Purchase Committee. They are, therefore, of the view that all articles available in India may be purchased by the Central Stores under the Chief Engineer, and that purchases through the Stores Purchase Committee should be limited to foreign purchases or global tenders.

Shri Veeraraj Urs stated that, as the Stores Purchase Committee has contacts with all the firms dealing in all kinds of articles needed and can get very competitive rates especially in the case of articles common to all departments, the Public Works Department should make its purchases through the Stores Purchase Committee.

The power to make direct purchases without reference to the Stores Purchase Committee is at present upto Rs. 10,000 which may be continued. In the case of emergent needs, however, we recommend that the power of direct purchase, *i.e.*, without consulting the Stores Purchase Committee, may be fixed at Rs. 25,000 for Chief Engineer, Rs. 10,000 for Superintending Engineer and Rs. 7,500 for Executive Engineer.

With regard to the *rate contracts approved by the Stores Purchase Committee*, the individual officer will place his indent directly with the firm, without reference to the Stores Purchase Committee, and simultaneously send copies of the indents to the Controller of General Stores. Where no rate contract exists, the indenting officers will inform the Controller of Stores about his normal requirements well in advance. The Controller of Stores will consolidate the demands from the various Divisions and send the same to the Secretary, Stores Purchase Committee, for necessary action if the cost exceeds Rs. 10,000, and if the value of purchase does not exceed Rs. 10,000, he will call for quotations as per rules and place the order with the approved firm with instructions that the articles may be sent direct to the Executive Engineers concerned.

Regarding the formation of a Transport and Machinery Division as a part of the Central Stores, as in Madras, we feel that, though this is a very good suggestion, it may not be necessary at present. We, however, consider that a Workshop should be attached to the

Central Stores, under a Mechanical Sub-Division with a mechanical working unit for carrying out repairs to machines, pumps, mathematical instruments, etc.

We consider that only articles that are not perishable, such as machinery parts, standard Steel Sections, sheets, pipes, surveying and mathematical instruments, etc., should be stocked in the Central Stores. We also recommend that only a Mechanical Executive Engineer should be employed as the Controller of Central Stores.

We suggest that the surveying and mathematical instruments and furniture, etc., supplied to Special Sub-Divisions or Divisions should be returned to Central Stores, when they are wound up, so that repairs or overhauling necessary to them, may be attended to and they may be kept in the Central Stores for meeting the requisitions from other offices.

As the maintenance of accounts is of primary importance in the Stores, the store clerks should be well trained in accounts and commercial book-keeping. We therefore recommend that the store-keepers both for the Central Stores and for the general Stores of the Divisions should form a separate cadre, as recommended in the Chief Engineer's letter No. 1829—Est. 57-58, dated the 17th December 1957 (*vide* Appendix V-B). The first grade store-keepers may be appointed to the Central Stores and to the Stores of Divisions with heavy transactions.

We consider that the system of store accounts as prevailing at present in the Central Stores of the Electrical Department especially the card system, store forms, loose-leaf sheets, etc., should be adopted in the Central Stores of the Public Works Department, and in a smaller degree in the Divisional Stores also. We also consider that the officers in charge of the Central Stores and the Store-keepers should visit the Central Stores of the Electrical Department and undergo training there for a period of about three months.

(b) *Stores of the Divisions.*

We have been informed that the store accounts of the Divisions are quite imperfect and that the returns of stock are always overdue, incomplete and incorrect. This is attributed to the Stores being in charge of untrained clerks. We consider that, with a separate cadre for store-keepers, men trained in accounts can be posted to the Divisions. For a heavy Division, one first grade store-keeper may be posted, along with a second grade clerk. For light Divisions, a second grade store-keeper would do.

We consider that a Store Manual, detailing the duties of Store-keepers, should be made available to every store-keeper. Such a Manual, we learn, has been prepared by the Government of Bombay.

(c) *Budget Grant and Lapses.*

107. We have considered the views of all the officers in this regard and we agree with them that no provision should generally be made in the budget for unsanctioned works. Lumpsum provision should however be made in the Budget, exclusively for the investigation of all Civil Engineering works. We cannot improve upon the suggestions noted in the Ninth Report of the Estimates Committee of the Lok Sabha, and given *in extenso* in Appendix V-C, and we recommend them for adoption with suitable modifications wherever necessary.

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CHAPTER VI

To examine the present codal provisions in respect of Executive Engineers, Sub-Divisional Officers (Assistant Engineers) and above and to suggest the general basis on which and the directions in which modifications may be made including further delegations of powers to departmental officers.

108. We then examined the question covered by the fifth item in the terms of reference, *viz.*, the delegation of further powers to the officers of the Public Works Department.

The Public Works Department officers who were interviewed by us stated that there is immediate necessity for enhancing the existing powers in order to speed up the works and also to facilitate the settlement of claims, and expressed the view that powers, as are obtaining in Bombay State, should be adopted in the New Mysore State. We felt that the request was quite reasonable. The Chief Engineer (General) was definitely of the opinion that, unless enhanced powers are delegated at all levels to the Public Works Department officers, there would be retardation of progress at all stages for one reason or the other and the targets set before the Department could not be achieved.

Accordingly, taking into consideration the powers existing in the different States that we visited, and examining the individual items on which enhanced powers are quite necessary, we recommend the delegation of powers as indicated in the statement appended hereunder. The powers recommended are similar to those obtaining in the Bombay Public Works Department.

Powers of Public Works Department Engineering Officers.

Sl. Number	Description	Chief Engineer		Superintending Engineer		Executive Engineer		Assistant Engineer	
		Existing	Recommended	Existing	Recommended	Existing	Recommended	Existing	Recommended
1	2	3	4	5	6	7	8	9	10
	ESTIMATES								
1	Administrative approval.	Rs. 1 lakh for budgeted works other than irrigation works, and other non budgeted works Rs. 25,000.	Rs. 2 lakhs for all budgeted works and full powers for special and emergent repairs.	Rs. 35,000 for all budgeted works other than irgn. works and Rs. 15,000 for non-budgeted works.	Rs. 50,000 for all budgeted works, and full powers for special and emergent repairs.	Rs. 10,000 for other than irrgn. works	Rs. 25,000 for all budgeted works.	Nil	Rs. 5,000 for all budgeted works.
2	Technical Sanction.								
	(a) Original works.	Full powers ...	No change ...	Rs. 35,000 for all works other than irrgn. works, and Rs. 15,000 for non budgeted works.	Rs. 2 lakhs ...	Rs. 10,000 for all works other than irrgn. works; new works or addl. works to existing works up to Rs. 7,500.	Rs. 25,000 ...	Nil	Rs. 5,000
	(b) Repairs ...	Rs. 25,000 if funds are available and up to 5 per cent of capital cost in respect of residential bldgs.	Full powers ...	Rs. 15,000 if funds are available (1) residential bldgs. 3 per cent of capital cost; (2) spl. repairs to Rds., Chls. and Tanks Rs. 1 lakh.	Full powers ...	Rs. 5,000 for other than Rds. and chls. Spl repairs of roads up to Rs. 25,000.	Full powers ...	Nil	Rs. 5,000
3	Tools and Plant.	Rs. 50,000 ...	Full powers subject to approval of Government to the list of machinery required to be purchased.	Rs. 15,000 ...	Rs. 50,000 ..	Rs. 2,000 ..	Rs. 5,000 ...	Nil	Rs. 500

Spl. T. & P.	...	Do	...	Rs. 50,000	...	Rs. 5,000	...	...
Repairs to lorries, tractors, etc.	Rs. 200	Rs. 10,000	Rs. 100	Rs. 2,000	...	Rs. 1,000	...	250
4 Electrical installation.	Rs. 25,000	Full powers	Rs. 5,000	Rs. 2 lakhs	Rs. 250	Rs. 1,000	..	...
5 Revised and suppl. estimates.	10 per cent of org. est. sanc. by Government excess being within Rs. 25,000 (2) Up to 5 per cent in excess of orig. est. sanc. by him, or 10 per cent excess of est. sanc. by S. E.	Sanction to Rev. and suppl. estimates limited to 25 per cent.	10 per cent excess over estimate sanc. by C.E. or Government subject to limit of Rs. 15,000; up to 5 per cen of est. sanctioned by him or 10 per cent over est. sanc. by E.E.	Can sanction up to 10 per cent of orig. est., provided total amount of works is within Rs. 2 lakhs.	Rev. est. within his powers of sanction	5 per cent of est., if total is within Rs. 25,000.	...	...
6 Excess over estimate.	5 per cent of org. sanc est. up to Rs. 25,000 sanctioned by him or Government and no excess over a rev. est. sanc. by Government.	Can pass excess over estimates up to 25 per cent.	5 per cent excess over sanc. est. either by him or higher authority up to Rs. 15,000 without any material alteration in the design.	10 per cent if total cost does not exceed Rs. 2 lakhs and up to Rs. 750 irrespective of amount of estimate.	5 per cent excess over est. sanc. by him or higher authority up to his powers of sanction, *i.e.*, Rs. 7,500 without any material deviation. No excess over revised estimate sanctioned by higher authority	(i) 5 per cent up to his powers of sanction, *i.e.*, within Rs. 25,000 or Rs. 300 in each case, irrespective of amount of est. (ii) No excess over estimate sanc. on mileage grant basis. (iii) Excess over sub-heads up to Rs. 5,000 if total amount of estimate is not exceeded by more than 5 per cent provided no material deviations are made.	...	...

Powers of Public Works Department Engineering Officers—*contd.*

Sl. Number	Description	Chief Engineer		Superintending Engineer		Executive Engineer		Assistant Engineer	
		Existing	Recommended	Existing	Recommended	Existing	Recommended	Existing	Recommended
1	2	3	4	5	6	7	8	9	10
7	Disposal of tenders.	(a) Up to Rs. 1 lakh if excess is not more than 5 per cent and lower or lowest tender is accepted. In other cases, amount of tender should not exceed Rs. 50,000. (b) Tenders not exceeding estimate amount in case of works costing between Rs. 1 and 2 lakhs. (c) Tenders or quotations up to 30 per cent in excess of estimate sanctioned by E.E.' or Range Officers; 20 per cent in excess of estimate sanctioned by S.E and 10 per cent by himself.	Full powers ...	(a) 20 per cent excess of estimate sanctioned by E.Es or Range Officers, (b) Up to Rs. 50,000 if excess of tender for work portion only is not more than 5 per cent. In cases in which any other tender is proposed to be accepted, the amount of tender should not exceed Rs. 30,000. (c) Upto Rs. 50,000 if lowest of more than one tender which is not more than the sanctioned estimate amount.	Rs. 5 lakhs ...	(a) 10 per cent excess over estimate sanctioned by him, or 5 per cent over estimate sanctioned by S.E. (b) In other cases up to Rs. 25,000 if excess is not over 5 per cent of work portion and lower or lowest tender is accepted. (c) In cases in which any tender other than lowest is proposed to be accepted, the amount of tender should not exceed Rs. 15,000. (d) Can execute agreements and contracts on behalf of Government.	Rs. 1 lakh provided excess involved not more than 5 per cent of work portion amount.	......	Rs. 5,000 provided the excess involved is not more than 5 per cent.
8	Purchase of Stores, Tools and Plant.	Rs. 10,000 without reference to S.P.C. Rs. 50,000 through S. P. C. (2)	(1) Rs. 1 lakh for general purposes, and full powers for specific works,	(1) Rs. 5,000 stores (through S.P.C.); 10,000 controlled articles like	(i) Upto Rs., 50.000 in respect of T and P and Rs. 1 lakh for ordinary	Stores Rs. 2,000 in each case; T and P Rs. 100 for each article of office	(i) Rs. 5,000 in each case subject to rules of purchase.	......	500

	Materials like iron, cement, pipes, etc.. from Government concerns and controlled commodity dealers to the extent of provision made in the estimate and also budget. Can also purchase machinery as per provisions in the sanctioned estimate. (3) Mexphalt for works up to the provision made in estimate (4) Can convey sanction to purchase up to Rs. 10,000 for advance payment of cash. (5) Furniture including Office equipment up to Rs. 500 under S.P.C. rules.	subject to provision in sanctioned estimate. Purchases over Rs. 10,000 to be made through S.P.C. In emergent cases purchase of stores, T and P may be made upto Rs 25,000 without reference to S.P.C.	cement, iron, steel, emulsion, etc. Tools and plant Rs. 15,000 through S.P.C.	stores, subject to rules of purchase.	furniture (except machinery and survey and mathematical instruments)			
				(ii) Furniture and office equipment full powers to new offices as per scales sanctioned.	......	(ii) For office furniture and equipment for existing offices up to Rs. 250 at a time.	......	......
			(2) To sanction purchase spare parts of automobiles and auto parts full powers, within sanctioned provision and budget.	(iii) Existing offices Rs. 500.	......	......	......	......
				(iv) In emergent cases, purchases of stores, T and P may be made upto Rs. 10,000 without reference to S.P.C.	......	(iii) In Emergent cases purchases of stores T and P may be made upto Rs. 7,500.	......	......
	For furniture and office equipment like time-pieces, clocks and table fans, etc., and also for pravasi-mandirs full powers as per scales prescribed for new offices. Rs. 1,000 to existing offices. (3) to sanction purchase of scientific and mathematical instruments.	Full powers ...						

Powers of Public Works Department Engineering Officers—*concld.*

Sl. Number	Description	Chief Engineer		Superintending Engineer		Executive Engineer		Assistant Engineer	
		Existing	Recommended	Existing	Recommended	Existing	Recommended	Existing	Re-commended
1	2	3	4	5	6	7	8	9	10
9	Work-charged establishment.	To appoint members on workcharged establishment up to Rs. 100 per mensem.	To appoint members on workcharged establishment on a pay Rs. 500 per mensem per head.	Rs. 100 per mensem per head.	Rs. 250 per mensem per head.	Rs. 40 per mensem	Rs. 100 per mensem per head.	......	......
10	Miscellaneous— (1) Reserve Stock limit.	Rs. 1 lakh in each case and excess of 20 per cent over the limits fixed by Government for short periods not exceeding 6 months.	One lakh in each case and excess up to 100 per cent over and above the present limit.	......	......	2(i) Loss of T and P stock on recovery of full value of T and P lost. Can write off if value is not more than Rs. 200 under report to S.E. (ii) Other than T and P surplus stores at their full value. (iii) Unserviceable stores if value not more than Rs. 500. (iv) Dismantled material at estimate value (v) Sales of T and P to contractors up to Rs. 200 in each case.	No change ..	......	......
	(2) Write-off of T and P and stores articles lost, etc.	Rs. 750 ...	Rs. 2,000 after due verification of stock and certified to that effect.	Rs. 500 ...	No change ...				

(3) Purchase of stationery.	To the extent covered by indent and limited to scale fixed. When the indent is not complied with by Government Stationery Depot within period of 1 month.	Full powers ..	Rs. 100 to Circle Office and Rs. 50 Division Office.	(i) Rs. 200 ...	Rs. 25 ...	Rs. 100 ...	......	Rs. 25 at a time but not exceeding Rs. 100 in a year.
	(2) For special works up to limit of Rs. 250 subject to provision made in sanctioned estimate.	(ii) To the extent of specific provision made in sanctioned estimate.	Rs. 50 ...	(ii) May purchase stationery if provision exists in estimate.	......	......	......	......
(4) Repairs to tents.	Rs. 250 for each tent at a time.	Substitute Rs. 100 for Rs 50.	......	......	......	......	......	......
(5) Journeys outside State.	Can permit N.G.Os.	Can permit both for N.G.O.'s and Gazetted Officers provided the journey is within the Indian Union.	......	......	......	......	......	......

NOTE—For all other items, the existing powers or powers as prevailing in Bombay State are recommended.

CHAPTER VII.

To examine the basic staff requirements of the department especially at higher levels and to suggest measures of economy wherever feasible.

(1) REGROUPING OF CIRCLES AND DIVISIONS.

(a) *Circles.*

109. At present there are four permanent Circles and seven temporary Circles, exclusive of those attached to the Sharavathy Valley Hydro-Electric Project, which is not in our purview, as already indicated in Chapter II. They are:—

Permanent

(1) Cauvery Circle, Mysore.
(2) Shimoga Circle, Shimoga.
(3) Bangalore Circle, Bangalore.
(4) Belgaum Circle, Belgaum.

Temporary

(1) South Kanara Circle, Mangalore.
(2) Sanitary Circle, Bangalore.
(3) Bhadra Reservoir Circle, Bhadra Reservoir Project Colony, Lakkavalli.
(4) Bhadra Tunnel Circle (Tunnel site).
(5) Tunga-Bhadra Reservoir Circle, Munirabad.
(6) Raichur Circle, Yermarus.
(7) Karnatak Irrigation Circle, Dharwar.

The South Kanara Circle, which is now temporary, may be made permanent, adding North Kanara to its present jurisdiction. Considering the improvements proposed for the West Coast Road and other development works, which are of a similar nature in both the Kanaras, this combination is desirable.

We find that there is no Circle for the superintendence of the Divisions in Hyderabad Karnatak, namely Raichur, Gulbarga and Bidar. As an interim arrangement the three permanent normal Public Works Department Divisions in those districts were attached to the Raichur Circle—Irrigation (temporary), which is for the execution of the Tunga-Bhadra Reservoir Right Bank Channel beyond the 100th mile and the Rajolibanda Diversion

Project. The Chief Engineer, Major Irrigation (North), has addressed the Government that the Superintending Engineer, Raichur Circle, may be divested of the charge of the three permanent Divisions which was given to him only as a temporary measure, since, with the additional charge, he is not in a position to devote full attention to the Tunga-Bhadra Channel Works. At the same time, the Chief Engineer (General) is urging the need for the formation of a separate permanent Circle for the normal work in the merged areas from Hyderabad.

That part of Karnatak being backward in regard to communications, irrigation and sanitary amenities, it needs intensive attention. It is also learnt that a number of buildings connected with the University campus and Industrial Estates in the Gulbarga area are under active consideration.

After examining the proposals put forward by the two Chief Engineers and other relevant facts, we recommend that a permanent Circle may be formed for the Hyderabad Karnatak area, with headquarters at Gulbarga, as suggested by the Chief Engineers.

The Sanitary Circle (temporary), Bangalore, may be abolised, but the staff of the Circle may be absorbed in the Designing Unit for Public Health Engineering works in the central office.

The Tunga-Bhadra Reservoir Circle at Munirabad, which is now temporary, has to be made permanent for looking after the Tunga-Bhadra Dam, Canals and irrigation thereunder. The Raichur Irrigation Circle may be abolished at the end of the Second Five-Year Plan period, if not earlier. It is better to increase the grants to complete the balance of work on the Tunga-Bhadra Left Bank Channel early, so that the Circle may be wound up and the entire Channel and the development of irrigation may be looked after by the Tunga-Bhadra Reservoir Circle at Munirabad, proposed to be made permanent.

It is proposed to form a new Circle, with headquarters at Mysore, for attending to the major irrigation projects like Kabbini and Lakshmanathirtha, as the work for the Superintending Engineer, Cauvery Circle, is very heavy and he cannot bestow adequate attention to the Kabbini Project. To this Circle will also be attached another new Division proposed for taking up the investigation and survey of the projects in Southern Mysore to be included in the Third Five-Year Plan.

There will thus be seven permanent Circles and five temporary Circles, as noted below :—

Permanent	*Temporary*
(1) Cauvery Circle, Mysore.	(1) Bhadra Reservoir Circle, Bhadra Reservoir Project Colony, Lakkavalli.
(2) Shimoga Circle, Shimoga.	(2) Bhadra Tunnel Circle, Tunnel Site.
(3) Bangalore Circle, Bangalore.	(3) Karnatak Irrigation Circle, Dharwar.
(4) South Kanara Circle, Mangalore.	(4) Raichur Circle, Raichur (Irrigation Circle).
(5) Belgaum Circle, Belgaum.	(5) Irrigation Project Circle, Mysore
(6) Gulbarga Circle, Gulbarga.	
(7) Tunga-Bhadra Reservoir Circle, Munirabad.	

(b) *Divisions.*

110. (I) *Cauvery Circle.*—At present, there are seven permanent and two temporary Divisions. They are :—

Permanent	*Temporary*
(1) Krishnaraja Nagar Division, Krishnaraja Nagar.	(1) Sugar Cane Cess Fund Division, Mandya.
(2) Mysore Division, Mysore.	(2) Kabbini Reservoir Division, Nugu-Birwal.
(3) Nanjangud Division, Mysore.	
(4) Krishnaraja Sagar Division, Krishnaraja Sagar.	
(5) Mandya Division, Mandya.	
(6) Malavalli Division, Mandya.	
(7) Hassan Division, Hassan.	

The jurisdiction of the Divisions in Mysore and Mandya Districts require adjustments due to the heavy work-load and also to see that the Divisions have jurisdictions within the Revenue Districts. At present, Krishnarajanagar Division, is in charge of works distributed over parts of three Districts, *viz.*, Mysore, Mandya and Hassan, which necessitates the Executive Engineer of the Division to correspond with the Deputy Commissioners of the three Districts. Similarly, Mysore Division has charge of Srirangapatna Taluk of Mandya District (except the C. D. S. channel). So also Kollegal Taluk of Mysore

District is attached to the Malavally Division. Further, the Community Development Blocks have come to stay, which necessitates the close co-ordination of the Public Works and the Revenue Departments in the districts. We therefore recommend that the works now attached to Krishnarajanagar Division in Hole-Narsipur Taluk of Hassan District and Krishnarajapet Taluk of Mandya District may be transferred to the Hassan and Krishnarajasagar Divisions respectively. Regarding the Mysore Division, the portion of Mandya District, namely Srirangapatna Taluk, now in Mysore Division, may be transferred to the Mandya Division. So also, Kollegal Taluk, now in charge of the Malavally Division, may be transferred to the Chamarajanagar Division.

By this arrangement, the jurisdiction of Krishnarajanagar Division gets substantially reduced, and it is therefore recommended that the Taluks of Hunsur and Periyapatna, in addition to the existing Krishnarajanagar Taluk, may form the jurisdiction of the Krishnarajanagar Division, with Sub-Divisions in each of the Taluks. Mysore, T.-Narsipur and Heggadadevankote Taluks will form into one Division, namely, Mysore Division, with headquarters at Mysore, having jurisdiction over all the buildings in Mysore City. The existing Buildings Sub-Divisions in Mysore, which are now under the Nanjangud Division, will come under the Mysore Division. Nanjangud Division will then be in charge of Nanjangud, Gudlupet, Chamarajanagar, Yelandur and Kollegal Taluks. The headquarters of this Division may be shifted to Chamarajanagar, as it is centrally situated. The Division may be renamed as ' Chamarajanagar Division '. The Krishnarajasagar Division will, in addition to its present work of regulation and maintenance at Dam site, be vested with the control of the Visvesvaraya Main Canal, inclusive of the regulators at the 24th mile, and all works in the Krishnarajapet and Pandavapura Taluks. The jurisdiction of Mandya and Malavalli Divisions may be re-allocated with the changes in jurisdiction of the Krishnarajasagar Division and with the complete transfer of Srirangapatna, suitably, keeping in view the desirability of vesting control of the entire Cauvery and Maddur branches of the Visvesvaraya Canal System, under one Executive Engineer. By this arrangement, the work-load of Mandya and Maddur Divisions may be equally distributed.

Regarding temporary Divisions, the Sugar Cane Cess Fund Division will be in charge of not only the construction and maintenance of roads in the irrigation tract in Mandya District, but also the new Sub-Divisions since sanctioned for the collection of statistics of irrigation and development works. It is learnt that this Division is sanctioned for five years, which requires re-examination. The other temporary Division, *viz.*, Kabbini Reservoir Division, is to be attached to the new Circle proposed to be formed afresh—Irrigation Project Circle, Mysore.

After this re-grouping, there will be seven permanent Divisions, as at present, but their jurisdictions re-allocated, and one temporary Division,—Sugarcane Cess Fund Division, Mandya.

(II) *Shimoga Circle.*—There are at present six permanent Divisions and they are :—

(1) Shimoga Division, Shimoga.
(2) Sagar Division, Sagar.
(3) Chikmagalur Division, Chikmagalur.
(4) Davangere Division, Davangere.
(5) Chitaldrug Division, Chitaldrug.
(6) Bellary Division, Bellary.

The Ambligola Range (temporary), now attached to the Bhadra Reservoir Construction Circle, may be transferred to the control of the Superintending Engineer, Shimoga Circle, as it will be well within his jurisdiction and can receive closer and more effective attention. The Bellary Division, under the control of the Superintending Engineer, Shimoga Circle, may be transferred to the Gulbarga Circle. The Ambligola Range may be converted into a Division.

It is also recommended that, after completion of the balance of work and closing of accounts of the Tunga Project, the same may be transferred to the control of the Shimoga Circle for maintenance, so that it may come under the purview of the Superintending Engineer, Shimoga Circle, with the ultimate object of bringing the entire irrigation system of Upper Tunga-Bhadra Valley under one control.

After this re-grouping, there will be five permanent Divisions and one temporary Division in this Circle.

(III) *Bangalore Circle.*—At present there are four permanent and three temporary Divisions, *viz.*:—

Permanent Divisions	*Temporary Divisions*
(1) Bangalore Division, Bangalore	(1) Vidhana Soudha Division, Bangalore.
(2) Kolar Division, Kolar.	(2) Industries Division, Bangalore.*
(3) Buildings Division, Bangalore.	(3) Sericulture Division, Bangalore. †
(4) Tumkur Division, Tumkur.	

The existing four permanent Divisions will remain unaltered, but to cope with the increased building programme of other Departments like Industries. Sericulture, Agriculture, etc., a Special Buildings Division may be formed for the construction of all the buildings of other Departments in Bangalore District. With the formation of this new Division, the existing two temporary Divisions, *viz.*, the Industries Division and the Sericulture Division, whose present jurisdiction extends over the entire State, may be abolished. The Water Supply Division, Bangalore, now attached to the Sanitary Circle, may be transferred to the Bangalore Circle, as the Sanitary Circle is proposed to be abolished as a Circle, but transferred as a Designs Unit to the Central Office.

After re-grouping there will be five permanent and three temporary Divisions, as detailed below:—

Permanent Divisions	*Temporary Divisions*
(1) Bangalore Division, Bangalore.	(1) Special Buildings Division, Bangalore. ‡
(2) Kolar Division, Kolar.	(2) Special Water Supply Division, Bangalore.
(3) Bumkur Division, Tumkur.	(3) Vidhana Soudha Division, Bangalore.
(4) Tuildings Division, Bangalore.	
(5) Water Supply Division, Bangalore.	

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* Now under the control of the Industres Department,
† Now underthe Sericulture Department.
‡ For other Department buildings.

(IV) *South Kanara Circle.*—At present there are three permanent and four temporary Divisions, as under :—

Permanent Divisions

(1) Highways Division, Mangalore.
(2) Public Works Department Division, Mangalore.
(3) Coorg Public Works Department Division, Mercara.

Temporary Divisions

(1) Coorg Minor Irrigation Department, Mercara.
(2) Special North Division (Highways), Kankanady, Mangalore-2.
(3) Special South Division (Highways), Kankanady, Mangalore-2.
(4) Public Health Engineering Division, Mangalore.

The two permanent Divisions, *viz.*, the Highways Division and the Public Works Department Division, Mangalore, may be combined into one Division and brought in line with the rest of the normal Public Works Department Divisions. So also, the Coorg Minor Irrigation Department may be wound up and its work handed over to the Coorg Public Works Division. The Public Health Engineering Division at Mangalore may be continued for some time more with two Sub-Divisions only, reducing one Sub-Division immediately, and ultimately reduced to a Sub-Division, as the Water Supply Works in Mangalore are completed. It is recommended that the North Kanara Division may be added on to this Circle, so that there may be unitary control on the development works relating to the West Coast Road. Besides, the Engineering problems in North and South Kanara districts are similar in nature.

After re-grouping, there will be three permanent Divisions and three temporary Divisions, as detailed below :—

Permanent Divisions

(1) Public Works Department Division, South Kanara, Mangalore.
(2) Public Works Department Division, Coorg, Mercara
(3) Public Works Department Division, North Kanara, Karwar.

Temporary Divisions

(1) Special North Division (Highways), Mangalore-2.
(2) Special South Division (Highways), Mangalore-2.
(3) Public Health Engineering Division, Mangalore

(V) *Belgaum Circle.*—There are at present four permanent Divisions and one temporary Division, as under:—

Permanent Divisions	*Temporary Divisions*
(1) Belgaum Division, Belgaum.	(1) Karnatak Public Health Works Division, Dharwar.
(2) Dharwar Division, Dharwar.	
(3) Bijapur Division, Bijapur.	
(4) Kanara Division, Karwar.	

The North Kanara Division, which lies at present in the jurisdiction of this Circle, is transferred to South Kanara Circle, Mangalore. The Dharwar Irrigation Division, now under the jurisdiction of the Karnatak Irrigation Circle, may be transferred to the Belgaum Circle, to deal with the minor and medium irrigation works. After some time, the question of amalgamation of this Division with the regular Public Works Department Division at Dharwar, requires re-examination, since the execution of works on a functional basis at the Divisional and Sub-Divisional level has to cease. The two permanent Irrigation Sub-Divisions will be attached to the permanent Division at Dharwar. After this re-grouping, there will be three permanent Divisions and two temporary Divisions, as under:—

Permanent Divisions	*Temporary Divisions*
(1) Belgaum Division Belgaum.	(1) Karnatak Public Health Works Division, Dharwar.
(2) Dharwar Division, Dharwar.	(2) Dharwar Irrigation Division, Dharwar.
3) Bijapur Division, Bijapur.	

(VI) *Gulbarga Circle.*—There is, at present, no Public Works Department Circle at Gulbarga. The three normal Public Works Department Divisions at Gulbarga, Raichur and Bidar are under the control of the Superintending Engineer, Raichur Irrigation Circle, Yermarus, which Circle is meant for the execution of the works connected with the Tunga-Bhadra Left Bank Channel—second portion. The Superintending Engineer cannot bestow his attention to both the charges. We have therefore recommended that a separate Circle may be formed with headquarters at Gulbarga, to be in charge of all the normal Public Works Divisions in the four Districts of Gulbarga, Bidar, Raichur and Bellary. With the likelihood of the increased tempo of works in Gulbarga district, we recommend that a portion of Gulbarga district may be added on to the Bidar Division, which is now very small in extent and work-load. The works now under the control of the Local Self-Government may be transferred on to the respective Divisions and the staff suitably re-distributed among the three Divisions. After this re-grouping there will be four permanent Divisions, as under:—

(1) Raichur Division, Raichur.
(2) Bidar Division, Bidar.
(3) Gulbarga Division, Gulbarga.
(4) Bellary Division, Bellary.

(VII) *Sanitary Circle.*—There are at present two permanent Divisions and four temporary Divisions attached to this circle and they are:—

Permanent Divisions	*Temporary Divisions*
(1) Water Supply Division, Bangalore.	(1) Special Water Supply Division, Bangalore.
(2) Controller of Central Stores, Bangalore.	(2) Sanitary Division, Bangalore.
	(3) Sanitary Division, Davangere.
	(4) Sanitary Division, Mysore.

The Sanitary Circle may be abolished and the Water Supply Divisions attached to the Bangalore Circle. The Sanitary Circle staff is proposed to be absorbed in the Designing section under the Chief Engineer.

The Controller of Central Stores should work under the Chief Engineer (Roads, Buildings and General). The Special Water Supply Division, Bangalore, is to be transferred to the control of the Bangalore Circle. The Sanitary Divisions at Bangalore, Davangere and Mysore are to be abolished, as there is not sufficient work-load for any of these Divisions, and all the ten Sub-Divisions attached to these Divisions are to be transferred to the respective permanent Divisions and to be closed as and when the works are completed.

(VIII) *Karnatak Irrigation Circle* (*Temporary*).—There are at present one permanent and five temporary Divisions, and they are:—

Permanent Divisions	*Temporary Divisions*
(1) Ghataprabha Left Bank Channel Division No. 1 Ghataprabha.	(1) Ghataprabha Left Bank Channel Division No. 2, Jamkhandi.
	(2) Ghataprabha Dam Division, Belgaum.
	(3) Malaprabha Irrigation Division, Dharwar.
	(4) Dharwar Irrigation Project Division, Dharwar.
	(5) Dharwar Irrigation Division, Dharwar,

As there does not seem to be enough work for the two Divisions, *viz.*, the permanent Left Bank Channel Division No. 1, Ghataprabha, and the Ghataprabha Left Bank Channel Division No. 2 (temporary) at Jamkhandi, the latter Division may perhaps be abolished, retaining a few Sub-Divisions. These Sub-Divisions may be attached to the permanent Division at Ghataprabha. The Dharwar Irrigation Division, Dharwar, may be transferred to the Belgaum Circle, as already proposed. The Dharwar Irrigation Project Division at Dharwar may continue the work on investigation and preparation of estimates for the projects coming under the Third Five-Year Plan. There is no need for the formation of another Division for the execution of the Dharma Project.

After this re-distribution there will be one permanent and three temporary Divisions in this Circle, as noted below:—

Permanent Divisions	*Temporary Divisions*
Ghataprabha Left Bank Channel Division, Ghataprabha.	(1) Ghataprabha Dam Division, Belgaum. (2) Malaprabha Irrigation Division, Dharwar. (3) Dharwar Irrigation Project Division, Dharwar.

(IX) *Tunga-Bhadra Reservoir Circle.*—There are at present seven temporary Divisions, as under:—

(1) Special Irrigation Division, Bellary.
(2) Reservoir Construction Division, Munirabad.
(3) Mechanical and Stores Division, Munirabad.
(4) Canal Construction Division No. 2, Oddarhatti.
(5) Canal Construction Division No. 3, Maski.
(6) Canal Construction Division No. 4, Sindhanur.
(7) Canal Construction Division No. 5, Sirwar.

We recommend that this Circle, along with the two Divisions, *viz.*, (1) Special Irrigation Division, Bellary, and (2) Reservoir Construction Division, Munirabad, may be made permanent as Maintenance Divisions. Out of the remaining five Divisions, the Canal Construction Division No. 5, Sirwar, may be transferred to the Raichur Circle, as recommended by the Chief Engineer, Major Irrigation (North), the works of that Division being nearer to Raichur. The Canal Construction Division No. 1, formerly attached to this Circle, is reported to have been shifted to Yermarus to the control of the Raichur Circle. In the remaining Canal Construction Divisions, *viz.,* Nos. 2, 3 and 4, the work-load is inadequate to justify the continuance of all the three Divisions, with the full establishment. The establishment in those Divisions needs reduction from now alone.

(X) *Raichur Circle.*—There are at present five Divisions in this Circle, as indicated below:—

(1) Canal Construction Division No, 1, Yermarus.
(2) Canal Survey Division, Yermarus.
(3) Mechanical and Stores Division, Yermarus.
(4) Upper Krishna and Bhima Division (Surveys), Yermarus.
(5) R. D. S. Division, Rajolibanda.

The Mechanical and Stores Division may be abolished and the Sub-Divisions attached to the Mechanical and Stores Division at Munirabad. The R.D.S. Division at Rajolibanda may be abolished and a Sub-Division, with adequate accounts staff, may be continued for the clearance of arrears and the closing of accounts. By the end of the Second Five-Year Plan period, if not earlier, it ought to be possible to close this Circle and entrust the maintenance work of the Tunga-Bhadra Dam and Canals to the Circle at Munirabad, which is to be made permanent.

(XI) *Irrigation Project Circle, Mysore.*—This is a new Circle proposed to be formed at Mysore with a view to reduce the work-load of Cauvery Circle. Major projects like Kabbini and Lakshmanathirtha are proposed to be attached to this Circle, as well as the new Division proposed for investigation and preparation of projects for inclusion in III Plan. This Circle will have three Divisions under it.

No changes are proposed in respect of the Bhadra Reservoir Circle and the Bhadra Tunnel Circle. They have at present five and three (temporary) Divisions, respectively.

111. To sum up, at present there are in all eleven Circles (five permanent and six temporary), and 70 Divisions (30 permanent and 40 temporary), excluding those in the Sharavathy Valley Hydro-Electric Project. After

the redistribution of charges, there will be twelve Circles (seven permanent and five temporary), and 62 Divisions (31 permanent and 31 temporary). The increase in the number of permanent Circles is due to the temporary Circle at Munirabad being made permanent and the formation of a new Circle at Gulbarga. Similarly, the increase in the number of permanent Divisions is due to the proposal for making two temporary Divisions at Munirabad permanent, while abolishing one permanent Division (Highways) in South Kanara.

112. We have not considered in detail the constitution of Sub-Divisions for the reason that the exact work-loads as at present obtaining in the different parts of the New Mysore State are not correctly available. In the Bombay and Hyderabad Karnatak areas, the jurisdictions of the existing Sub-Divisions are heavy, extending over three to four taluks. It is, therefore, desirable to increase the number of Sub-Divisions suitably.

The Development Commissioner, Mysore, has stated that in the coming years the volume of Community Development works will increase and that there will be sufficient work-load of Rs. 5 to 7 lakhs in each Taluk. In such a case, a Sub-Division will be required for each Taluk, except in a few cases where it may be possible to combine two Taluks into a Sub-Division's jurisdiction. The question may be examined in detail in consultation with the Chief Engineer and the number and the constitution of the Sub-Divisions in each Division may be fixed as early as possible.

(2) STAFF REQUIREMENTS OF THE CHIEF ENGINEERS' AND OTHER OFFICES.

113. We examined in detail the working of the offices of the two Chief Engineers, *viz.,* Chief Engineer (General) and the Chief Engineer, Major Irrigation (South). Section-wise requirements under each category were considered. Based on this data, organisation charts were drawn up for the efficient working of these offices (Appendix VI-A, B, C and D). A consolidated statement, indicating the existing [including the Chief Engineer, Major Irrigation (North)] and the proposed

strength of each of the three offices of the Chief Engineers has been prepared, *vide* Appendix VI-E.

The staff required for the Establishment, Budget and Accounts as well as General Branches (Records, furniture, etc.) is shown in a separate chart, and it will be under the seniormost Chief Engineer.

(*a*) The need for having separate Designing Branches under the two permanent Chief Engineers having been recommended the staff required for these Branches, has also been incorporated in the charts.

(*b*) In addition, the Chief Engineers have been called upon to co-operate with the authorities of the several organisations at the Centre, such as the Central Water and Power Commission, the Central Board of Irrigation and Flood Control Board, the National Building Organisation, the Institute of Standards, the Road Research Institute, etc., and attend to Inter-State questions pertaining to river valleys. Voluminous data will have to be collected, compiled and forwarded in the required *pro forma*, besides furnishing reviews, reports, connected maps, etc., on several symposiums on technical subjects as Soil Conservation, rain-fall studies, agriculture, irrigation, road experiments and the like, Seminars on which have become a regular feature.

(*c*) We learn that the Chief Engineer (Roads, Buildings and General) has been repeatedly urging Government for the additional staff to his office on the score that the work in his office has become unmanageable on account of inadequate staff, and applied for an increase of fifty per cent. After careful consideration of the volume of work in each of the branches, we have provided for the necessary Gazetted and Non-Gazetted staff—both technical and ministerial. The proposed establishment is quite necessary to ensure satisfactory work. A detailed statement, indicating the staff as existing and as proposed, will be found at Appendix VI-E.

While considering the subject, 'Schedule of Rates', which is a pre-requisite for the preparation of estimates, satisfactory and economic execution of works and settlement of disputed claims (dealt with separately in Chapter IV), a temporary Division comprising the staff indicated in Appendix VI-F, for a period of one year, has been proposed for the preparation of a correct Schedule of Rates.

The existing staff of the office of the Chief Engineer, Major Irrigation (North), was considered adequate for the new office of the Chief Engineer (Irrigation Projects). With the addition of two Executive Engineers and two Assistant Engineers, now working in the office of the Chief Engineer, Major Irrigation (South). The remaining staff (both technical and ministerial) attached to the office of the Chief Engineer, Major Irrigation (South), have all been taken into account while working out the staff requirements for the two permanent offices of the two Chief Engineers. The over-all picture of the strength is indicated in column 11 of Appendix VI-E. However, it is felt that the staff proposed for the Chief Engineer (Irrigation Projects) is to be reviewed when the headquarters is fixed and the office starts functioning.

As it is resolved that the control of accounts is to be transferred to the charge of the Controller of State Accounts, no establishment is proposed under the Chief Engineer, except one Financial Assistant to work under the two Chief Engineers to deal with Budget, Accounts and general questions. This Financial Assistant will be the Financial Adviser to both the Chief Engineers. The Financial Assistant now attached to the Chief Engineer, Major Irrigation (North), will continue to work in the office of the Chief Engineer (Irrigation Projects).

The General Assistant (Assistant Commissioner) will deal with the establishment matters of the Public Works Department working under the control of the Chief Engineer who holds the Establishment portfolio.

The necessity for a Registrar (a Gazetted, non-technical Office Assistant), as in other States, was also felt in order to exercise an over-all control over the Records Sections of the Offices of the two Chief Engineers, *viz.*, (1) Chief Engineer (Roads, Buildings and General) and (2) Chief Engineer (Irrigation and Public Health). In fact, there is a Registrar under the Chief Engineer, Major Irrigation (North). Under the Registrar's charge, the Cash Branch will also work. This officer will deal with the receipts of tappals and their distribution to the several

Sections, maintenance of accounts relating to office furniture and equipments, library, etc., despatching work, and also control over the menial establishment of both the offices.

There has been some increase in respect of the strength of Superintendents, First and Second Division Clerks, Typists and menial establishment. This is due not only to the formation of separate Designs Sections under the two Chief Engineers, but also to cope with the all-round increased intelligent work because of the integration of States and the varied type of correspondence from the different Sections of the Central Government and the Planning Commission.

Considering the existing total strength of all the three offices of the Chief Engineers, the over-all increase, as proposed, would be much less than what is applied for by the Chief Engineer (General).

The comparative statement in Appendix VI-E discloses the detailed requirement and the redistribution of the staff among the three offices. The question of reduction or otherwise of the non-Gazetted staff attached to the office of the Chief Engineer, Major Irrigation (North), now proposed to be transferred *in toto* to the office of the Chief Engineer (Irrigation Projects), is a matter to be re-examined after some time.

The volume of work in the Circle, Division and Sub-Division offices having considerably increased, at present, due to the multifarious activities of the Department, there is necessity for some increase in the staff of these offices also. After careful examination, a small increase in the existing strength of Supervisors, First and Second Division Clerks and Draftsmen, etc., has been proposed for these offices, which is felt to be quite necessary for their satisfactory working, *vide* Appendix VI-G.

At present, there are no Stenographers in the Circle or Division offices. The necessity for Stenographers was urged by the Superintending Engineers and Executive Engineers. We feel that, by giving the services of Steno-Typists to the Superintending Engineers and the Executive Engineers, not only can immediate and urgent references from the higher offices be disposed of promptly, but also the inspection notes, so important for the efficient and speedy execution of works, could be attended to then and there.

A post of an Assistant Engineer in the Division Office is also felt necessary to deal with projects and to look after the current work of the Division Office during the absence of the Executive Engineer from the headquarters on tour.

In view of the powers now proposed for the Assistant Engineers in respect of sanction to estimates, disposal of tenders, etc., it is felt quite necessary that there should be a senior experienced Clerk, qualified in accounts, in the Sub-Division to deal with such matters. The Chief Engineer (General) has already made a recommendation to Government to upgrade one of the three existing posts of second division clerks to that of a first division clerk, thereby reducing the number of second division clerks to two. We however recommend that a first division P. W. D. clerk, qualified in accounts, might be posted to each Sub-Division in addition to the existing second division clerks, *i.e.*, there will then be one first division clerk and three second division clerks, on a permanent basis. One Assistant Draftsman is also proposed for each Sub-Division to deal with the estimates, to maintain the concerned registers, *viz.*, Watch Registers, List of Sanctions, and Return of Sanctions, Building Registers, etc.

Loaning of officers.—A statement showing the particulars about the officers loaned to other Departments from the Public Works Department, has been received from the Chief Engineer. It is seen that as many as six Superintending Engineers, 20 Executive Engineers and 83 Assistant Engineers—besides many graduate and non-graduate subordinate officers—are lent to other departments. While making selections, panels of names of officers are called for and the best men picked, which affects the efficient execution of works in the Department. We feel that it is not desirable in the interests of the Department.

(3) GOVERNMENT ARCHITECT.

114. The Government Architect explained to the Committee that he was now working both as Government Architect and as Town Planner. We will refer to Town Planning in a subsequent Chapter.

After discussing the duties and the work now being done by the Government Architect, we resolved that, since the execution of the buildings is a very important work of the Public Works Department, the Architect should be attached to the Chief Engineer (Roads, Buildings and General), and that the Government Architect should immediately take up the work of preparing standard type designs, duly approved by the concerned departments for all the general types of buildings, such as Medical, Educational, Industrial Labour, etc., and the quantities of each item of work should be tabulated and approved by the Chief Engineer, except for foundations. An approximate estimate of the cost of each design, based on the up-to-date schedule of rates, should also be approved by the Chief Engineer as an appendix thereto. They should then be got printed and distributed to the departments concerned.

We considered the proposals for the increased staff submitted by the Government Architect and we feel that there is no need for augmenting the existing establishment.

(4) ESTABLISHMENT FOR COMMUNITY DEVELOPMENT AND NATIONAL EXTENSION SCHEMES.

115. We have considered the Development Commissioner's letter (Appendix VI-H), intimating that one graduate Surveyor or a Sub-Engineer and one Sub-Overseer are required for each Block. There are 120 Blocks in action, covering 86 Taluks and the total number of Blocks allotted for all the taluks is 262. It is proposed to cover the entire State by 1963. The staff required for the Community Development Blocks depletes the strength in the Public Works Department and increases the cadre under temporary service. The baneful effect of such service is well known.

We recommend that, *against the total posts created for the purpose of Community Development blocks, the number of posts in the respective cadre in the Public Works Department may be increased permanently by 50 per cent and the balance may be temporary.*

We have given careful consideration to the Government Order, integrating the provisions in the Community Development Blocks and the provisions in the Public Works Department Budget for minor irrigation, and suggesting the procedure in the execution of such works. We consider that the 'de-silting of tanks' (the right method to restore the tank to its original capacity) cannot be taken up without the help and co-operation of the ryots and that this work should appropriately be taken up by the Community Development authorities.

We understand that the technical supervision and execution of all other works would rest entirely with the Public Works Department; but, we are told that the departmental authorities (Public Works Department) have not been apprised of their exact work regarding execution, supervision and the check of works in the Community Development Blocks. Government may examine this and issue suitable orders defining their duties *vis-a-vis* the Community Development authorities to effect the technical supervision of the Community Development Block works, which is lacking now.

Regarding the enhancement of powers for the Public Works Department officers, referred to in the Development Commissioner's letter, we have separately recommended in Chapter VI the enhanced powers for all officers of the Public Works Department, inclusive of the Assistant Engineers.

CHAPTER VIII.

GENERAL.

(*a*) *Town Planning.*

116. In the integrated areas of Bombay, Madras and Hyderabad, there is a Town Planning Act in force, and the Government Architect in Mysore has been doing the functions of both Architect and Town Planner since integration. The work of town planning has not made much headway in these areas, after integration. There is no Town Planning Act in existence in the former Mysore area, and the cities and towns are growing in a very haphazard manner. The activities of the Town Planner and the Architect are distinct from one another. One for the planning of towns for a settled order of development, and the other for planning buildings. We learn that the Government of India have addressed the States to have a separate Town Planning Section, and they have agreed to give the necessary grants. They are stressing the importance of a Master Plan for every City in the States, to see and enforce that every development fits in with it, and that the slum clearance is considered from a practical point of view, for which large sums are granted by the Centre. We had also a reference from the Government on the same subject for consideration.

After detailed discussion, we consider that it is necessary to have a Town Planning Section, and the proposition statement, as recommended by the State Town Planner, for the establishment of a Town Planning Department, is generally approved. The head of the organisation may be designated as the 'Director of Town Planning' with the status of a Minor Departmental Head.

(*b*) *Research Station.*

117. The set-up of the present Research Station at Krishnaraja Sagar is for (1) Basic Studies and (2) Model Studies in Hydraulic Engineering.

The need for two Research Stations one for Highways and Buildings and another for Hydraulics was examined in detail.

After full consideration of the case, we recommend :

(i) *That there is need for two separate Research Stations, one for Highways and Buildings and another for Hydraulics. They may both be located at Krishnaraja Sagar and looked after by one Research Officer stationed there.*

(ii) *The Research Station may be reorganised with necessary establishment to cope with the increased work.*

(iii) *To attract men of high intelligence and qualification for the special nature of duties in the Research Station and to serve as an incentive, a suitable allowance should be given to all men selected as Research Workers from the normal Engineering Cadres.*

(iv) *At least one Scholarship or Fellowship offered by the Government of Mysore or by the Government of India through the Government of Mysore should be given every year to one of the personnel working in the Research Station. This will serve as an incentive in promoting good and sustained work.*

(v) *The Research Sub-Division attached to Karnatak Irrigation Circle may be under the control of the Research Officer at Krishnaraja Sagar.*

(c) *Central Workshop for each Circle.*

118. This is a mechanical age. For the expeditious work as per targets, the use of machinery is an absolute necessity. The Public Works Department tools and

plant were, till recently, restricted to trucks and road rollers and a few pumping sets. To-day, the compressor and drilling unit for quarrying, crushers, granulators, etc., for metal breaking, concrete-mixers and vibrators for the concrete-work, the asphalt-heaters and mixers for road works, and the huge earth-moving equipment, are the common equipments in the Divisions. There is therefore an absolute necessity for the periodical check-up at regular intervals in order to ensure their trouble-free working. It is not only inconvenient but also uneconomical to get the machinery repaired by an outside agency. Moreover, they cannot be got repaired in time. We wish to emphasise therefore that a *Central Workshop, attached to each Circle, under a Mechanical Assistant Engineer,* is necessary.

We learn that, in Belgaum Circle, there is already a Workshop, attending to all repairs and maintenance of machinery of all the Divisions in the Circle, and that the staff consists of three mechanical Supervisors and three Junior Clerks besides the Assistant Engineer. It is reported that there is a foundry section in that Workshop and that there are not many breakdowns of the mechanical equipment in use in this Circle.

Excluding this Circle, there are five Circles of Superintendence. The Krishnaraja Sagar Workshop, which is fairly well equipped, may be improved into a Central Workshop to serve the Cauvery Circle. It is estimated that, in order to have decent workshops for four Circles, the capital expenditure will be about Rs. 12 lakhs, at Rs. 3 lakhs per workshop. With the improvements to the Belgaum and Krishnaraja Sagar Workshops, the total capital outlay will not be more than Rs. 15 lakhs. The expenditure incurred in maintenance and repairs to the machinery is quite appreciable. In some Divisions, the expenditure is reported to be of the order of two lakhs. Hence, the capital expenditure will pay itself.

We therefore recommend that there should be a Workshop attached to each Circle, which will ensure prompt attention being paid to the machinery and avoid costly machinery being kept idle. Regular Workshop and manufacturing accounts should be maintained.

(*d*) *Bore-well Section.*

119. Details of the drills available in the Bore-well Section are as under:—

Number of all kinds of drills	48
Unserviceable drills	6
Total serviceable drills	42

Mayo drills ..	7	They can be used in coastal areas and for ports.
Patna drills ..	4	
Percussion drills ..	13 (a)	6 only in service now 7 not being used for want of staff.
Aucker drills ..	12 (b)	All in service.
Calyxite drills ..	6	These are intended for taking cores.
	42	

The number of drills that are available for drilling bore-wells is thus only 25 (a *puls* b), of which two are lent to the Hindustan Aircraft, Limited. Hence only 23 drills are actually available.

There are two Assistant Engineers (Sub-Divisions) in charge of bore-well sinking, with Headquarters at Bangalore, attached to the Controller of Stores. Every time a requisition comes in, the staff moves from Bangalore and returns to Bangalore after completion of the work. This is certainly wasteful from all points of view.

We consider that it is necessary to reorganise the bore-well section by distributing the drills to the various places, instead of concentrating them in one place. We suggest that four drills may be given to each of the Public Works Department Circles. We learn that each drilling unit requires an operator, a fitter, a helper, a cleaner, a watchman and a blacksmith, and that there should be one bore-well Inspector for each Circle. The Bore-well Section may be attached to the proposed Workshop Sub-Division in the Circle.

(*e*) *Stationery and Forms.*

120. It was the general complaint of the officers interviewed by us that the work in all the offices of the

Public Works Department is suffering due to the short supply of stationery and printed forms in particular. They also stated that the submission of the accounts to the Accountant General, was, many a time, delayed for want of the prescribed printed forms, the use of which is insisted upon by the Accountant General.

After examining this question we were convinced about the difficulties experienced by them and we therefore recommend that the Chief Engineer should fix up the standard annual requirements of stationery and forms of each of the offices of the Public Works Department and intimate the same to the Director of Printing and Stationery, who should despatch the stipulated requirements to all offices including Sub-Divisions without waiting for the annual indents from the concerned offices.

सत्यमेव जयते

CHAPTER IX.

ACKNOWLEDGMENTS.

122. We wish to acknowledge our obligations to the Chief Engineers of Koyna, Bombay, Andhra Pradesh, Nagarjunasagar, Madras and Kerala, who were kind enough to meet us and discuss with us, furnishing valuable information. Shri G. G. Dhanak, Superintending Engineer (Designs), Bombay, and Shri Hardikar, Chief Engineer (General), Andhra Pradesh, were specially helpful.

We are much indebted to Shri P. V. R. Rao and to the various officers in and outside the State who have taken much trouble in replying to our Questionnaire and furnishing their views which were of great value to us.

We are also thankful to the various officers who interviewed us and gave us the benefit of their rich experience in explaining their difficulties and suggesting remedies.

We are much obliged to the Chief Engineer (General) and his staff for furnishing all the information that was required by us. We are specially thankful to his Assistant, Shri K. Padmanabhan, who willingly and readily gave us the graphs and other particulars required by us. We thank the Accounts Officers who discussed the accounts matters in great detail with us.

We would like to place on record our appreciation of the good work done by the staff given to the Committee. They have done their work with much zeal and ability. The work done by Shri S. K. Potty, Stenographer, requires special mention. Our thanks are due to all of them.

(Sd.) B. S. NARASINGA RAO,
Chairman.

(Sd.) K. S. GANGADHARA,
Member.

(Sd.) M. N. KAMATH,
Member.

(Sd.) M. VASUDEVA RAO,
Member.

(Sd.) M. VEERARAJ URS,
Member.

(Sd.) C. R. KRISHNASWAMY MUDALIAR,
Member.

(Sd.) T. S. MOORTHI,*
Member.

(Sd.) G. S. GANAPATHY,
Member.

(Sd.) L. C. MUNISWAMY REDDY,
Member-Secretary.

BANGALORE,
Dated the 26th June 1958.

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* Signed with the following remarks :—

Para 105 :—I suggest that the words "or above" in the last line are omitted.

Para 110 (*Page* 74)—*VIII. Karnatak Irrigation Circle.*

In place of the first two sentences of the sub-para 2 commencing with "As there does not etc. . . ." and ending at "Division at Ghataprabha".

Read :—I do not agree with this (presumably this decision was taken in the meetings on 23rd and 26th June, which I did not attend).

The second stage work has to be completed by the end of Second Plan period, *i.e.*, by June 1961. The balance amount to be spent on the Canal only is about Rs. 430 lakhs in the next three years. At about Rs. 40 lakhs expenditure per Division per annum this would need at least three Divisions. Therefore *the existing two Divisions are essential.* The allotment during the current year is very low and it is likely this alone has been considered to assess the Establishment needed. Till the end of the Second Plan period no reduction in staff should be made.

Para 110 (*Page* 76)—*IX. Tungabhadra Reservoir Circle.*

For the sentences commencing with "In the remaining canal" and ending with that sub-para—*Read* :—C. C. Division No. 2 is proposed to be converted into Maintenance Division.

So also, R. C. Division after the clearance of arrears of work. Only then could these Divisions be abolished : not till then.

As for C. C. Divisions 3 and 4, they have heavy work on hand. The details were discussed in the former meetings and a decision taken to continue them. The C. C. Divisions 3 and 4 will have to be continued during the Second Plan period.

(Sd.) T. S. MOORTHI,
Dated 10th July 1958.

SUMMARY.

FIRST TERM OF REFERENCE.

Organisation and Chief Engineers' Charges.

CHAPTER II.

	Para No.
(1) The Public Works Department work should be on a functional basis only at the highest level, *i.e.*, at the Chief Engineer's level; the Superintending Engineers, Executive Engineers and Assistant Engineers should be on a *territorial* basis	10
(2) There should be two Chief Engineers for the normal work of the Public Works Department, instead of one Chief Engineer (General), as it is physically impracticable for one Chief Engineer to attend to the very heavy work in the entire New Mysore State; one Chief Engineer to deal with Roads, Buildings and general matters and the other Chief Engineer to deal with Irrigation and Public Health. These two posts of Chief Engineers will be permanent	17
(3) The posts of the two Chief Engineers, Major Irrigation (North) and (South), are combined into one post under the designation of 'Chief Engineer (Irrigation Projects)'. This post will be till 1963 and is temporary ..	20
(4) There will thus be three Chief Engineers, two permanent, *i.e.*, Chief Engineer (Roads, Buildings and General) and Chief Engineer (Irrigation and Public Health), and one temporary, *i.e.*, Chief Engineer (Irrigation Projects)—with a Board of all the Chief Engineers for dealing with all common problems ..	21

THIRD TERM OF REFERENCE.

Separate Engineering organisations for works of other Departments.

CHAPTER III.

Para No.

(5) There is no need for a separate set-up outside the Public Works Department for Public Health Engineering. If the work-load justifies, separate Sub-Divisions and Divisions may be formed for the execution of Public Health Engineering works and attached to the respective Divisions and Circles in their territorial jurisdictions 26

(6) The public works of all departments should be executed only in the Public Works Department. There should be no separate organisation in other Departments of Government, outside the Public Works Department, for the execution of works 30

(7) The complaints of other departments about the slow progress of works have been examined and remedial measures have been suggested 32

SECOND TERM OF REFERENCE.

Reorganisation of the department for effective and efficient working.

CHAPTER IV.

(8) There is an absolute necessity for Designs Sections at all levels—with a Superintending Engineer and Executive Engineer and staff for each of the Chief Engineers, with an Assistant Engineer and staff for each of the Superintending Engineers, and with an Assistant Engineer and staff for each of the Executive Engineers .. .. .. 35—39

Para No.

(9) For the investigation and preparation of plans and estimates for works to be taken up in the Third Five-Year Plan in the south, one Irrigation Project Circle with one Division and three Sub-Divisions should be formed. Similarly, one Division with three Sub-Divisions, attached to the Gulbarga Circle, to be formed for the Hyderabad Karnatak areas. The existing Karnatak Irrigation Circle will continue for the investigation of plans in the Bombay Karnatak area .. 41—45

(10) For surveying minor tanks one Sub-Division for each of the regular Divisions, with an extra Sub-Division for the following Divisions, *viz.*, Bangalore, Kolar, Tumkur, Hassan, Chikmagalur and North Kanara, should be formed, with the necessary staff and additional clerks for the Divisions .. .. .. 46—47

(11) To prepare a realistic Schedule of Rates, one Division with two Assistant Engineers and four Supervisors and staff should be formed for one year 56

(12) For the proper assessment of river valley potential in the entire State, two Gauging Divisions with necessary staff and equipment should be formed for a period of four years .. 60

(13) Works should normally be executed under the contract system. Smaller works costing up to Rs. 10,000 may, however, be done by piece-work system. The departmental system of execution should not be resorted to save in exceptional circumstances. The 'rate-list' system, as in Bombay, may be adopted in the case of works of small magnitude of a recurring nature .. .. .. 61—65

(14) Contractors should be registered and classified into " A ", " B ", " C " and " D " categories according to their capacity and financial status. Tenders should be called for even after registration of contractors 66

	Para No.
(15) Indenture agreement for payment of advances to the contractors on materials, etc., may be adopted, as in Bombay	69
(16) The procedure to be adopted for arbitration may be finalised after obtaining legal opinion	71
(17) There should be a tightening up of the duties of the officers and contractors for the quick disposal of claims	72
(18) Tenders should be advertised in newspapers in addition to the notification in the *Mysore Gazette*	73
(19) Procedure laid down for the acceptance of tenders other than the lowest valid tender ..	74
(20) Work-load for a regular Division may be normally Rs. 30 to Rs. 35 lakhs per year, and that for a Sub-Division Rs. 5 to Rs. 7 lakhs. Only senior Executive Engineers may be posted for charge of heavy Divisions. The establishment charges may be limited to 12 per cent in the case of regular Divisions and 8 per cent in the case of projects	75—77
(21) Procedure laid down for the filling up of posts of non-Gazetted staff	78
(22) The recruitment to the posts of Assistant Engineers should be in the ratio of 1:3, *i.e.*, one by direct recruitment by merit and written examination, and three by promotion ..	79
(23) Crossing of efficiency bars in the Supervisor's cadre should be regulated on the basis of recommendation reports classified into "A", "B", "C1", "C2" and "D", as per the Bombay practice	81
(24) The scale of pay of the Chief Engineer should be Rs. 1,500—75—1,800 and that of the Superintending Engineer Rs. 1,000—50—1,200, as in Madras. There is no change in the scales of pay of the Executive Engineers and Assistant Engineers	90

Para No.

(25) Graduate Supervisors will be designated as Junior Engineers and started on Rs. 170 in the grade Rs. 150—10—300. In future graduates will be recruited as Junior Engineers. There should be one class of subordinates holding recognised Certificates and Diplomas, *viz.*, Supervisors, there being no separate classification like Sub-Overseers, Overseers and Sub-Engineers. The Supervisors will have a running grade of pay, *viz.*, Rs. 70—5—90/E.B. 6—120/E.B. 10—250. Supervisors will be started on Rs. 90 .. 90

(26) There should be no category of officers named Sub-Divisional Officers. All promotions should be made to the rank of Assistant Engineers only and all Sub-Divisions should be manned by Assistant Engineers 90

FOURTH TERM OF REFERENCE.

Accounts.

CHAPTER V.

(27) There should be complete transfer of accounts staff to the Controller of State Accounts 93

(28) There should be a Financial Assistant to the Chief Engineers to deal with procedural matters of finance, budgeting, etc. 94

(29) The Divisional Accountants should attend entirely to the accounts work of the Divisions, correspondence and routine matters being dealt with by the Head Clerk. The strength of the Accounts Section has to be augmented 95

(30) Arrear schedules should be left over at a particular period and current schedules prepared thereafter, and the opening balance corrected later on 97

	Para No.
(31) Standard measurement books should be maintained for A. R. Works, and abstract of measurements written up at the end of the measurement books	98
(32) An *ad hoc* committee should review the arrears and irregularities observed in Audit and Inspection reports once in a quarter ..	98(f)
(33) The system of credit sales to contractors should be stopped except in special cases to be approved by Government on the recommendation of the Chief Engineer	99(c)
(34) Special staff is needed for reconciliation of book and actual balances, consisting of one stock-verifier and two clerks, for a period of one year	99(D)
(35) An *ad hoc* committee of three Engineering officers should be formed to examine the unserviceable articles and obsolete stores ..	99(E)
(36) All purchases should be generally passed through 'Stock'	99(F)
(37) The dues of local bodies to the Public Works Department should be debited to their loan account to clear the Miscellaneous Advances account	99(G)
(38) Independent stock-verifiers should be appointed for the verification of the stocks in the Divisions	100
(39) Scriptory work in Accounts should be minimised by (a) treating works costing Rs. 5,000 and below as petty works, (b) converting the submission of the Suspense Schedule as an annual return, and (3) dispensing with the submission of contractors' ledger monthly	102
(40) Vigilance Squad, consisting of very senior officers of the Engineering and Accounts Departments, should be formed for making surprise check of works in progress	105

Para No.

(41) A Central Store should be formed with a small work-shop attached to it, on the lines of the Central Stores of the Electrical Department. A separate cadre of store-keepers should be formed 106

(42) Provision should not generally be made for unsanctioned works in the Budget. Adequate lumpsum provisions, should however be made for investigation of works 107

FIFTH TERM OF REFERENCE.

Powers.

CHAPTER VI.

(43) The powers of officers at various levels should be enhanced 108

SIXTH TERM OF REFERENCE.

Establishment.

CHAPTER VII.

(44) The charges of Circles and Divisions have been re-grouped for efficient working and administrative convenience. There will be a reduction in the total number of Divisions from 70 to 62. Regarding the Sub-Divisions, the Chief Engineer may examine their charges with reference to the load of work together with the addition of Community Development works .. 109--112

(45) The establishments of the offices of the Chief Engineers, Superintending Engineers, Executive Engineers and Assistant Engineers are laid down 113

Para No.

(46) Standard plans should be got prepared by the Government Architect for all types of buildings and duly approved by the departments and the quantities and estimates approved by the Chief Engineer 114

(47) For the Community Development Blocks, one Junior Engineer and one Supervisor should be sanctioned for each block, and procedure for work laid down 115

GENERAL.

CHAPTER VIII.

(48) A Town Planning Section is necessary and the head of the section may be designated as Director of Town Planning, with the status of the head of a minor department 116

(49) The research organisation of the Public Works Department should have two sections—(1) highways and buildings and (2) irrigation—with adequate staff, and located at Krishnaraja Sagar. The head of the organisation should be called the Director of Research. The Soil Research Sub-Division attached to the Karnatak Irrigation Circle will work under the Director of Research, Krishnaraja Sagar 117

(50) A central work-shop for each Circle should be established as in Belgaum, for repairs of machinery and plant 118

(51) The bore-well section should be reorganised and the boring drills distributed to various Circles, instead of concentrating them in Bangalore 119

(52) The requirements of stationery and forms of each unit of the Department should be standardised by the Chief Engineer and got approved by Government. The Director of

Para No.

Printing and Stationery should send the approved requirements without waiting for the annual indents from the officers. Ten per cent of the total requirements of the Public Works Department should be kept in reserve with the Chief Engineer to meet the urgent requirements of new special Divisions, etc., sanctioned 120

(53) Officers should be empowered to purchase stationery and get forms printed locally, within their limits of power, if the "no stock" certificate is not received within a month 121

(54) Acknowledgments 122

APPENDIX 1-A.

Government Orders constituting the Committee.

GOVERNMENT OF MYSORE

PUBLIC WORKS DEPARTMENT

G.O. No. PWD. 450 EWG 57, dated 18th November 1957.

Committee.

Constitutes a —— for Reorganisation of Public Works Department.

ORDER No. PWD. 450 EWG. 57, DATED BANGALORE, THE 18TH NOVEMBER 1957.

At present there are three Chief Engineers in the State as noted below:—

(1) The Chief Engineer (General), dealing with roads, buildings, sanitary and water supply schemes and minor irrigation works which cost less than Rs. 10 lakhs, as also establishment matters.

(2) The Chief Engineer, Major Irrigation (South), dealing with selected projects like Bhadra, Tunga, Nugu, Ambligola, Sharavati, Lakshmanathirtha and other Second Plan Projects in former Mysore State and in South Kanara, Coorg and Kollegal Area costing over Rs. 10 lakhs.

(3) The Chief Engineer, Major Irrigation (North), dealing with major irrigation projects in the Hyderabad and Bombay Karnatak Areas as also Bellary District.

The first two Chief Engineers have their Headquarters at Bangalore while the last is stationed in Munirabad. This arrangement was brought into existence in accordance with the Government Order of 19th October 1956, issued immediately prior to the reorganisation of States after discussions at the Inter-State Meetings.

After a careful consideration of all aspects, it is considered that a comprehensive examination of the entire question of reorganisation of the departmental set-up in the Public Works Department would be of advantage and it is accordingly directed that a Committee consisting of—

1 Sri B. S. Narasinga Rao, B.A., B.E., Chief Engineer (Retired), (*Chairman*).

Members

2 Sri K. S. Gangadhara, B.E., Chief Engineer (Retired),
3 Sri M. N. Kamath, B.E., Chief Administrative Officer Engineering College, Manipal,
4 Sri S. A. L. Razvi, I.A.S.,
5 Sri T. S. Moorthi, B.Sc., B.E.,
6 Sri C. R. Krishnaswamy Mudaliar, B.E.,
7 Sri M. Veeraraj Urs, I.A.S.,
8 Sri B. S. Srikantaiah, I.A.S. (*Member-Secretary*),

be constituted with the following terms of reference:—

1. To examine the working of the Public Works Department with reference to the scope and extent of the present Chief Engineers' charges and to make proposals, if necessary, for the re-allocation of charges.

2. To suggest measures for the more effective and efficient execution of Plan and other Civil Works in the Department at all levels and to make recommendations for the re-organisation of the department either at particular levels or as a whole, as the Committee may find necessary.

3. To examine the need for setting up separate organisation or organisations outside the Public Works Department for Engineering Works in the Local Self-Government, Education, Public Health and other Departments which have sizeable programmes of Civil Works.

4. To recommend measures for securing prompt and correct accounting of transactions of the department at various levels and towards that end to propose such reorganisation of the accounts set-up in the department as may be considered necessary.

5. To examine the present codal provisions in respect of Executive Engineers, Sub-Divisional Officers (Assistant Engineers) and above and to suggest the general basis on which and the directions in which modifications may be made including further delegations of powers to departmental officers.

6. To examine the basic staff requirements of the department especially at higher levels and to suggest measures of economy wherever feasible.

The Committee is requested to forward its report to Government within three months.

By Order and in the name of the Governor of Mysore,

D. K. SRINIVASACHAR,
Secretary to Government,
Public Works Department.

Order No. PWD 450 EWG 57, dated 18th December 1957.	Sanctioning establishment for the Committee.
Order No. PWD 496 EWG 57, dated 31st December 1957.	Appointing Shri L. C. Muniswamy Reddy, Supeintending Engineer, as full time Member-Secretary of the Committee.
Order No. PWD 498E WG 57, Dated 5—7th February 1958.	Appointing: (1) Shri M. Vasudeva Rao, I.A.S., Secretary to Government, L.S.G. Department, as a Member of the Committee, *vice* Shri S.A.L. Razvi, transferred, and (ii) Shri G. S. Ganapathy, Chief Engineer (General), as an additiona Member.
Order No. PWD 56 EWG 58, dated 10th March 1958.	According sanction to the continuance of the Committee up to the end of June 1958.

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APPENDIX 1-B.

Communications on various subjects received from Government from time to time for the opinion of the Committee.

Sl. No.	Communication Number and date	Subject
1	File No. PWD 3 ORG 57.	Formation of Highways Department in Mysore State.
2	PWD 332 GTG 57, dated 20th January 1958.	(i) Survey of Irrigation Tanks in the State of Mysore. (ii) Establishment of an investigation unit for Irrigation and Power Projects to be taken up during the Third Plan Period.
3	PWD 8 IRI 58, dated 23rd January 1958.	Compilation of technical reports on Major River Valley Projects.
4	PWD 7 VSD 57, dated 28th January 1958.	Departmental execution of works of big magnitude like Vidhana Soudha Building.
5	U.O. Reference on PWD File No. 3 CTB 58.	Repair grants to Communications.
6	PWD 86 EWG 58, dated 4th March 1958.	Posting of First Division Clerks to Sub-Divisions.
7	PWD G.I. 4355, dated 29th April 1958.	Continuance of Krishnarajasagar Division.
8	PWD 66 DBL 58, dated 1st May 1958.	Formation of an Engineering Unit in the Agricultural Department for construction of buildings.
9	U.O. Reference, dated 13th May 1958 on LSG & PH Department File No. LLH 34 IAB 58.	Creation of a separate Town Planning Department.
10	PWD 128 RAI 57, dated 22nd May 1958.	Procedure regarding the recording of final measurements of Public Works.
11	PWD 42 RAI 57, dated 2nd June 1958.	Introduction of a system of administrative audit of works in the PWD—Creation of Chief Technical Examiner's Cell.
12	PWD 22 EWG 57, dated 4th June 1958.	Divesting Superintending Engineer, Raichur Circle of the charge of Rajolibanda Project.
13	PWD 143 GTG 58, dated 11th June 1958.	Review of targets of Agricultural production in the Second Five-Year Plan (Taking over of all Minor Irrigation Works by P.W.D.).
14	U.O. Reference, dated 17th June 1958 on PWD file No. PWD 5 EWG 58.	Change of designation of the Officers of the Public Works Department.
15	U.O. Reference, dated 19th June 1958 on PWD file No. PWD 47 TMP 57.	Purchase of Tools and Plants. Delegation of powers to the Chief Engineers.

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APPENDIX I-C (1).

QUESTIONNAIRE I.

A. ORGANISATION.

1. (*a*) In the new Mysore State there are differences in the set-up for the execution of various kinds of works in the Public Works Department in the different areas namely former Mysore, Bombay-Karnatak, Madras-Karnatak, Hyderabad-Karnatak and Coorg. What uniform organisational pattern would you suggest for the New State for efficient administration and execution of works ?

(*b*) Do you favour unified control or the division of the department into separate branches on a functional basis such as the Highways, Buildings, Irrigation, Public Health Engineering, etc. ?

(*c*) Do you favour the formation of separate Engineering establishments for the departments of Public Health, Education and Industries and other autonomous or local bodies, outside the Public Works Department ?

(*d*) What set-up do you suggest for investigation and execution of Minor Irrigation works in the Second Five-Year Plan, having regard to the large grants under this item to be utilised ?

(*e*) Will not loaning of officers from the Public Works Department to work in the other departments affect efficiency ?

(*f*) What loads would you suggest for (1) routine works (2) special works for Circles in-charge of Superintending Engineers, Divisions in-charge of Executive Engineers and Sub-Divisions in-charge of Assistant Engineers ?

B. TECHNICAL.

2. Do you consider that a separate unit or organisation is necessary for designs and preparation of plans and estimates ? If so, to what levels, Division, Circle or Chief Engineer, should such units be attached ?

C. ACCOUNTS.

3. (*a*) What are your suggestions for framing budget estimates which would be free from heavy lapses and excesses ?

(*b*) What measures do you propose for securing prompt and correct accounting of transactions of the department at various levels ? What organisation do you propose for achieving this object ?

(*c*) What measures do you suggest for maintaining proper stores accounts ? What qualifications do you prescribe for (1) Divisional Stores Keepers, (2) Project Stores Keepers and (3) Store Keeper for the Central Stores ?

(*d*) Do you feel that there should be a Central Purchase unit for the whole of the Public Works Department ? What should be the status of the officer to be in-charge of the unit ?

(*e*) What departmental examinations would you propose for the First and Second Division Clerks employed in the Public Works Department ?

(*f*) Do you consider it necessary to modify the accounts examination for Engineering officers to be more rigorous to minimise accounts objections ?

(*g*) What measures do you propose for getting up a realistic schedule of rates ?

(*h*) Do you favour the registration and classification of contractors ?

(*i*) What are your suggestions to avoid complaints from contractors regarding delays in settlement of claims ?

(*k*) What are your proposals for cost accounting in works executed departmentally ?

APPENDIX I-C (2).

QUESTIONNAIRE II—FOR PUBLIC WORKS DEPARTMENT OFFICERS.

I.—ADMINISTRATION, ESTABLISHMENT, GENERAL.

Please furnish information on the following :—

1. The number of Divisions/Sub-Divisions in his charge (temporary and permanent) ?

2. The strength of establishment—both technical and ministerial—in the Circle/Divisional Office.

3. Do you feel that there is work for all the Divisions/Sub-Divisions in your charge, assuming a certain standard work-load for a Division/Sub-Division ? Have the number to be increased or decreased ? State with reasons. Is there any scope for decreasing the number of Divisions by increasing the number of Sub-Divisions in a Division ?

4. What should be the maximum jurisdiction of a Division/Sub-Division to secure efficient supervision ?

5. What is the maximum number of normal Divisions/Sub-Divisions which a Superintending Engineer/Executive Engineer can effectively supervise ?

6. Do you feel that the existing strength of staff in the Circle/Division is sufficient ? If not, what do you propose for the efficient working, and support it by data ?

7. Do you feel that a non-technical assistant of the rank of a First Grade Superintendent (besides a Technical Assistant) is necessary to deal with routine and correspondence ?

8. Do you feel that a designing and investigation section is needed in the Circle/Division ? If so, the status of the officer and the strength for the Circle/Division ?

9. Are there any items of work on which your time is wasted and which could be avoided ?

10. Are there any facilities lacking in the Circle/Division, which, if provided, would speed up the work in your office ?

11. How is the strength of the draftsmen in a Circle/Divisional Office fixed? Is it to be fixed on the number of works and the number of Divisions/Sub-Divisions? Can you suggest any method of fixing them?

12. Can the strength in the Accounts Branch be fixed on the basis of Sub-Divisions or on the basis of the number of vouchers handled? Is the strength enough for the proper maintenance of accounts and for submitting the accounts on the fixed dates?

13. What is the staff which you consider reasonable for the maintenance of store accounts?

14. On what works do you employ a graduate surveyor and on what other works a Sub-Overseer (Diploma-holder)? Do you fix them on the load? Do you prefer the graduate Surveyors to serve as Section Officers under whom diploma-holders can work? Now they are all called Overseers and Supervisors. Do you think the graduate may be called Junior Engineer and the Diploma-holder a Supervisor?

15. Have you any comments regarding the quality of the staff in the Circle/Division? Does it in any way hamper the progress of work in the Circle/Division? Do you think it is an important factor in determining the load of a Circle/Division? Have you any remedial measures to suggest?

16. Are you entrusted with an item of work which you consider need not be done by your department but may be entrusted to other departments?

17. Are there any special features in your Circle/Division which you take into account in fixing the volume of work entrusted to your Circle/Division?

18. What difficulties do you feel in regard to check measurements and payment of works?

II.—PROCEDURE FOR OBTAINING SANCTION OF WORKS.

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(A) *Administrative Approval.*

1. Do you obtain the administrative approval on the basis of detailed estimates? If not, on what basis? What is the exact difference of getting such approval for estimates for works of other departments and for estimates of the Public Works Department?

2. How much time on an average does it take from the issue of administrative approval to the commencement of the work? Do you consider the period satisfactory? If not, what improvements would you suggest? What are the causes of delay? Is it due to delay in obtaining technical sanction?

3. In Mysore, with regard to administrative approval, the Chief Engineer can accord sanction to Rupees one lakh for all works which are specifically provided for in the budget, except *Irrigation works*. Do you feel that Irrigation works are to be included? May not this (*i.e.*, non-inclusion) be a cause for delay in the execution of works of irrigation?

4. Is it not desirable to allow some tolerance of deviation on administrative approval, to avoid going over again the formal routine? In some States the tolerance is 10 per cent. What is

your opinion, and if so, to what extent? Should the tolerance be subject to a maximum monetary limit? If so, what limit would you suggest?

(B) *Procedure for execution of works.*

1. (*a*) Do you feel that the existing powers of sanction under all heads such as original repairs, tools and plant, repairs to lorries, etc., are enough? If not, what would you propose?

(*b*) Do you consider that the powers delegated to the various authorities are adequate? If not, to what extent should these be enhanced?

(*c*) Is there any delegation of powers which you would recommend to ensure speed and efficiency?

2. What is the limit of powers regarding sanction of revised and supplemental estimates in your area, before Integration? Do you suggest any modification? If so, what are your suggestions? Is it necessary to have an amount limit?

3. It is the general complaint from the other departments that works are not carried out expeditiously and that they would prefer to have men under their control. If so, what are the causes of delay? What remedies would you suggest to avoid this?

4. Have not type designs and specifications been standardised with respect to medical and school buildings? If not, why not? Is this not one of the bottlenecks for getting approval in time?

5. Why are works taken up without sanctioned estimates in large numbers, while ordinarily no work should be started without sanction? Even then why are not estimates prepared immediately thereafter to get sanction? Why not confine the practice only to *really very, very emergent works* such as closing of the breaches of tanks, repairs of damages to bridges, etc?

6. Why is no action taken to get the revised estimates sanctioned immediately it is known that an excess is likely to occur or when an excess has actually occurred? Why not the procedure of sending up work slips as noted in the Code be observed?

7. Why do excesses occur? Is it due to defective estimating or substantial deviations? Are the latter authorised in each case? If so, why should there be delay in reporting the excess in time?

8. Would you suggest any difference in the procedure of obtaining sanction between large and small projects? If so where would you draw the line?

(C) *Allotment of funds.*

1. How is the Schedule of demands initiated and submitted to the concerned authorities for budget provision and on what basis is it prepared? Do you suggest any improvement in the prescribed procedure?

2. How is allotment of funds made? Do you consider the present procedure for allotment satisfactory? As the period for irrigation works is very limited due to the monsoons, do you not feel that the allotment of funds sanction, etc., are to be intimated to allow time for calling of tenders, etc., to take advantage of the full working season from November to May? Will not a token

grant in the year previous to the year of work to call for tenders, etc., and the acquisition of site obviate this?

3. Who controls the re-appropriation of funds:

(i) from one project to another,
(ii) from one service to another, and
(iii) from one sub-head to another?

Do you suggest any modifications?

(D) *Tenders.*

1. Do you feel that the powers of acceptance of tender as in vogue in Mysore need enhancement for the speedy disposal of the same?

2. Are tenders advertised? If so, in what manner? Is the advertisement made irrespective of the monetary limit of the tender? If not, what are the limits up to which tenders need not be advertised?

3. What is the normal period allowed for submission of tenders after the issue of tender documents? Does it vary with the amount or nature of the work to be done? Do you consider that the time allowed at present is adequate or excessive? Have there been any complaints about the inadequacy of the time allowed?

4. Are there not cases of entering into negotiations with the contractors who have tendered? If so, on what basis are such negotiations started and why?

5. How are freak rates (*i.e.*, those varying from the standard rates by over 25 per cent quoted by tenderers dealt with? Are the contractors asked or permitted to amend such rates, and if so, under what circumstances? How are, such rates distinguished from genuine errors? How are genuine errors dealt with?

6. What are generally the reasons for ignoring the lowest tenders? Do you suggest any improvements to the procedure obtaining for getting that (*i.e.*, other than the lowest tender) approved by the authorities?

7. What is the time that normally elapses between the opening of tenders, the decision to award the contract, the acceptance of the tender and the issue of a work order? Do you consider this period satisfactory? Generally the complaint is that there is considerable delay in the decision causing undue hardships, etc. What improvements do you suggest to avoid the delay in the disposal of tenders?

(E) *Contractors.*

1. Have you any procedure in your region for the registration of contractors? Are the registered contractors categorised with due regard to the value of contracts and their financial capacity to execute them? How often are the lists of registered contractors reviewed and on what basis are new contractors added or old ones deleted? What, if any, are the arrangements made to obtain performance records of the contractors?

2. Do you consider that the issue of tenders should be restricted to registered contractors only? Please state your reasons for any modifications.

3. What in your experience is the extent of deviations from the accepted tender or contracts? What is their nature and what remedies would you suggest to reduce the deviations to the minimum?

4. Do deviations result in (*a*) delay in the execution of works, (*b*) extra cost to Government, (*c*) delays in the settlement of bills, (*d*) more disputes with the contractors? If your answer is in the affirmative, please give reasons for it and state how the various disadvantages can be eliminated?

5. What are generally the reasons for the grant of extension of time to contractors and what steps would you suggest to improve the situation in this respect and to ensure completion of the work within the scheduled time?

6. What has been your experience in regard to the working of different types of contractors, particularly with regard to any difficulties encountered?

7. Do you consider greater flexibility should be given to Engineers, to adopt a type of contract different from that which may at present be prescribed for a particular type of work and which may be more suitable?

8. What is the quantum of supervision and the level at which it is exercised over works in execution? Is this considered satisfactory? And does it ensure that the quality of work executed by the contractors is up to the standard specifications? If not, what changes would you suggest?

9. Would it not be desirable to maintain a reserve of particular types of materials required to be supplied to contractors? If so, on what basis would you determine the reserve?

10. Are any difficulties being experienced in obtaining quotas of iron, steel and cement supplies against the quotas? If so, what steps are you proposing or proposed to be taken up to overcome these difficulties? Is it practicable to place an indent one year in advance?

11. What is the procedure for the settlement of disputes which may arise with the contractors? Is the existing procedure for the arbitration of disputes working satisfactorily? If not, what improvements would you suggest?

(F) *Audit Objections.*

1. What are the causes leading to the delay in the settlement of objections raised by statutory audit, etc.? What are your suggestions to remedy these?

2. Why are the accounts of stores not maintained in accordance with the rules? Is there any practical difficulty in following the rules?

3. Are the stocks verified at regular periods, or at least when there is a change of incumbents? If not, how do you handle your stock returns and stock accounts?

(G) *Recruitment.*

1. Do you consider the methods of recruitment to several cadres satisfactory? If not, what changes would be desirable?

2. Are there any scales—yard-sticks—laid down on the basis of which the strength of the non-gazetted executive staff (Junior Engineers, Supervisors) and non-gazetted staff of Chief Engineer, Superintending Engineer, Executive Engineer and Sub-Divisional Officer, is sanctioned ? If not, what would you suggest ?

3. Are there training courses for direct recruits and departmental examinations for promotion and crossing of efficiency bars ? If so, is the existing system working out satisfactorily ?

4. There is a general feeling that the Public Works Department work is inefficient. If so, what in your opinion is it due to and what remedies would you suggest ?

APPENDIX I-C (3).

QUESTIONNAIRE III—ACCOUNTS.

1. What are your suggestions for framing budget estimates which should be free from heavy lapses and excesses ?

2. What measures do you propose for securing prompt and correct accounting of transactions of the department at various levels ?

What organisation do you propose for achieving this object ?

3. What measures do you suggest for maintaining proper stores accounts ?

What qualifications do you prescribe for (1) Divisional Stores Keepers, (2) Project Stores Keepers and (3) Store Keeper for the Central Stores ?

Will it not be better if an Accounts Clerk is earmarked to maintain the store accounts ?

4. What departmental examinations would you propose for the First and Second Division Clerks employed in the Public Works Department ?

5. Do you consider it necessary to modify the accounts examination for Engineering Officers to be more rigorous to minimise accounts objections ?

6. What are your suggestions to avoid complaints from contractors regarding delays in settlement of claims ?

7. What are your proposals for cost accounting in works executed departmentally ?

8. Can the strength in the Accounts Branch be fixed on the basis of Sub-Divisions or on the basis of the number of vouchers handled ?

Is the strength enough for the proper maintenance of accounts and for submitting the accounts on the fixed dates ?

9. What is the staff which you consider reasonable for the maintenance of store accounts ?

10. How is the schedule of demands initiated and submitted to the concerned authorities for budget provision and on what basis is it prepared ?

Do you suggest any improvement in the prescribed procedure?

11. How is allotment of funds made?

Do you consider the present procedure for allotment satisfactory?

As the period of irrigation works is very limited due to monsoons, do you not feel that the allotment of funds, sanction, etc., are to be intimated to allow time for calling of tenders, etc., to take advantage of the full working season from November to May?

Will not a token grant in the year previous to the year of work to call for tenders, etc., and the acquisition of lands obviate this?

12. Who controls the re-appropriation of funds:

(i) from one project to another,
(ii) from one service to another, and
(iii) from one sub-head to another?

Do you suggest any modifications?

13. What are the causes leading to the delay in the settlement of objections raised by statutory audit, etc.?

What are your suggestions to remedy these?

14. What are the accounts of stores not maintained in accordance with the rules?

Is there any practical difficulty in following the rules?

15. Are stocks verified at regular periods, or at least when there is a change of incumbents?

If not, how do you handle your stock returns and stock accounts?

16. Are there training courses for direct recruits and departmental examinations for promotions and crossing of efficiency bars?

If so, is the existing system working out satisfactorily?

APPENDIX I-C (4).

QUESTIONNAIRE IV FOR PUBLIC HEALTH ENGINEERING OFFICERS.

1. What is your jurisdiction and what are the works in your charge? How are they carried out?

2. Have all the officers in your charge undergone special training or courses of study in Public Health Engineering? Or, are they mere Civil Engineers or Mechanical Engineers of the Public Works Department? How many subordinate officials, actually in charge of works, have undergone special courses of study in Public Health Engineering?

3. Do you feel that there is necessity for a separate Public Health Branch for charge of sanitary and water supply works? If so, do you feel also that all the staff of that Branch should

consist of only those that have undergone the special training courses in Public Health Engineering? Are such men available in sufficient numbers? It is suggested by the Chief Engineer of some States, that the Investigation and Design portions of the Public Health Engineering Projects may be under a Superintending Engineer specialised in that Branch with adequate specially trained staff under the Chief Engineer (General) and the execution of works left to the permanent Public Works Department Divisions. What is your opinion regarding this?

4. Generally, in urban water supply schemes about 50 per cent of the cost will be for pipes, 10 to 15 per cent for proprietory machinery leaving a balance of only 35 per cent for the construction portion. Can that not be entrusted to the permanent Divisions?

5. What is the general load for an Executive Engineer and an Assistant Engineer exclusively in charge of water supply and sanitation works?

6. What exactly is the difference between the rural and urban water supply schemes and how are they arranged for? Are all the rural water supply schemes proposed to be executed by the Community Development Boards? If so, how do the Sanitary and Water Supply Divisions come into the picture of rural water supply?

7. As the water supply and drainage schemes are handed over to Local Bodies for maintenance after completion of the original works, will there be need for permanent establishment?

8. What are the causes for the delay in the completion of water supply works? What are the remedies you propose?

APPENDIX I-D.

List of persons and institutions to whom the questionnaire I was sent.

1. The Chief Secretary to the Government of Mysore.
2. The Secretary to the Government of Mysore, Law Department.
3. The Additional Secretary to Government, Law Department.
4. The Secretary to Government, Public Works Department
5. The Secretary to Government, Local Self-Government and Public Health Department.
6. The Secretary to Government, Revenue Department.
7. The Secretary to Government, Planning Department.
8. The Secretary to Government, Education Department.
9. The Secretary to Government, Home Department.
10. The Secretary to Government, Finance Department.
11. The Secretary to Government, Legislature Department.
12. The Additional Secretary to Government, General Administration Department.
13. The Secretary, Stores Purchase Committee, Bangalore.
14. The Divisional Commissioner, Bangalore.
15. The Divisional Commissioner, Mysore.

16. The Divisional Commissioner, Belgaum.
17. The Divisional Commissioner, Gulbarga.
18. The Chief Engineer (General), Bangalore.
19. The Chief Engineer, Major Irrigation (South), Bangalore.
20. The Chief Engineer, Major Irrigation (North), Munirabad.
21. The Chief Accounts Officer, Office of the Chief Engineer (General), Bangalore.
22. The Superintending Engineer, Bangalore Circle, Bangalore.
23. The Superintending Engineer, Belgaum Circle, Belgaum.
24. The Superintending Engineer, South Kanara Circle, Mangalore.
25. The Superintending Engineer, Tunga Bhadra Project Reservoir Circle, Munirabad.
26. The Superintending Engineer, Raichur Circle, Yermarus.
27. The Superintending Engineer, Major Irrigation Tank Works, Mercara
28. The Superintending Engineer, Cauvery Circle, Mysore.
29. The Superintending Engineer, Bhadra Reservoir Circle, Lakkavalli.
30. The Superintending Engineer, Sharavathi Valley Hydro-Electric Project, Kargal.
31. The Superintending Engineer, Karnatak Irrigation Circle, Dharwar.
32. The Superintending Engineer, Shimoga Circle, Shimoga.
33. The Superintending Engineer, Tunnel Circle, Bhadra Reservoir Project.
34. The Superintending Engineer, Sanitary Circle, Bangalore.
35. The Executive Engineer, Sericulture Division, Bangalore.
36. The Executive Engineer, Industries Division, Bangalore.
37. The Executive Engineer, Ghataprabha Left Bank Canal Division 2, Jamkhandi.
38. The Executive Engineer, Minor Irrigation Division, Coorg.
39. The Executive Engineer, Nanjangud Division, Mysore.
40. Shri N. Lakshminarasimhaiah, Ex-Minister, Kotah State.
41. Shri M. Narasimaiah, Chief Engineer (Retired), and Member, Plan and Project Committee, New Delhi.
42. Dr. K. L. Rao, Member, Design and Research, Central Water and Power Commission, New Delhi.
43. Shri K. S. Krishnaswamy, Deputy Director General, Public Health Engineering, New Delhi.
44. Shri A. Shivraj, Chief Engineer, Bombay.
45. Shri J. G. Hardikar, Chief Engineer (Roads and Buildings), Andhra Pradesh.
46. Shri L. Venkatakrishna Iyer, Chief Engineer, Andhra Pradesh.
47. Shri U. Ananda Rao, Chief Engineer (General), Madras.
48. Shri K. K. Nambiar, Chief Engineer (Highways), Madras.
49. Shri A. K. Char, Chief Engineer, Chambal Project, Madhya Pradesh.
50. Shri H. V. Visweswariah, Secretary to Government (Retired), Public Works Department, Mysore.
51. Shri K. D. Joshi, Secretary to Government (Retired), Public Works Department.

52. Shri M. G. Rangiah, Chief Engineer and Secretary to Government (Retired), Public Works Department, Mysore.
53. Shri K. R. Seshachar, Chief Engineer (Retired), Bangalore.
54. Shri H. Ananthachar, Chief Engineer (Retired), Bangalore.
55. Shri T. Ramaswamy Iyengar, Chief Engineer (Retired), Bangalore.
56. Shri M. N. Lakshmana Rao, Chief Engineer (Retired), Bangalore.
57. Shri M. V. Krishnaswamy Iyengar, Chief Engineer (Retired), Bangalore.
58. Shri N. Neelkantappa, Chief Engineer (Retired), Mysore.
59. Shri D. V. Rao, Chief Engineer (Retired), Hyderabad.
60. Shri M. S. Sitarama Rao, Chief Engineer (Retired), Hyderabad.
61. Shri Venkatachar, Chief Engineer (Retired), Madras.
62. Shri B. Krishna Rao, Superintending Engineer (Retired), Bangalore.
63. Shri H. C. K. Bhatta, Superintending Engineer (Retired), Bangalore.
64. Shri C. N. Shama Rao, Superintending Engineer (Retired), Bangalore.
65. Shri K. S. Venkataramanan, Superintending Engineer (Retired), Bangalore.
66. Shri C. R. Iyengar, Superintending Engineer (Retired), Bangalore.
67. Shri M. Muniappa, Superintending Engineer (Retired), Bangalore.
68. Shri V. Ganesha Iyer, Superintending Engineer (Retired), Bangalore.
69. Shri N. Krishna Iyengar, Superintending Engineer (Retired), Bangalore.
70. Shri Batni Bheema Rao, Superintending Engineer (Retired), Shimoga.
71. Shri A. G. Naik, Superintending Engineer (Retired), Bombay.
72. Shri Veera Raghavan, Superintending Engineer (Retired), Hyderabad.
73. Shri N. V. Khursale, Superintending Engineer, Aurangabad.
74. Shri D. S. Venkanna, Chief Engineer (Retired), and Principal, Alagappachettiar College of Engineering and Technology, Karaikudi.
75. Shri K. S. Chakravarti, Civil Chief Engineer, Tata Hydro-Electric Construction Company, Bombay.
76. Shri S. Ramaswamy, Superintending Engineer (Retired), and Principal, National Institute of Engineering, Mysore.
77. Shri T. Rama Rao, Superintending Engineer (Retired), and Professor, National Institute of Engineering, Mysore,
78. The Secretary, Gokhale Institute of Public Affairs, Bangalore.

APPENDIX I-E.

Itinerary of the Committee.

Date	*Places visited*
8-1-1958 ...	Visit to Koyna Project—Discussions with the Local Engineers and Officers at Koyna.
10-1-1958 and 11-1-1958.	Bombay—Discussions with the Chief Engineers of Bombay.
13-1-1958 ...	Hyderabad—Discussions with the Chief Engineers of Andhra Pradesh.
14-1-1958 ...	Nagarjunasagar—Visit to the works at Nagarjunasagar and discussions with the Chief Engineer and the Local Engineers and Officers of Nagarjunasagar Dam.
16-1-1958 ...	Madras—Discussions with the Chief Engineers of Madras.
30-1-1958 ...	Trivandrum—Discussions with the Chief Engineers of Kerala State.
10-5-1958 ...	Visit to Bhadra Reservoir Project Works and discussion with the Local Engineering Officers.
11-5-1958 ...	Visit to Sharavati Valley Project and discussion with the Local Engineering Officers.

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APPENDIX I-F.

Calendar of the dates of meetings and business transacted.

Meeting and date	Business transacted
I 4-12-1957 ...	Discussion on the procedure of meetings, the data to be collected and the information to be obtained from different States, the questionnaire to be issued, the technical assistance to the Committee and the tour programme.
II 6-1-1958 ...	Confirmation of the minutes of the First Meeting of the Committee. Consideration of the letters received from the Accountant General, Bangalore and others. Took decision on the lines of discussion with the officers during visits to other States and the nature of information to be obtained from them.
III 11-2-1958 ...	Confirmation of the minutes of the Second Meeting of the Committee. Consideration of the letters received from Government for the opinion of the Committee. Preparation of a list of Public Works Department Officers to be interviewed for elucidation through personal discussion.
IV 11-3-1958 and 12-3-1958	Confirmation of the Minutes of the Third Meeting of the Committee. Interview of the Public Health Engineering Officers and the Civil Engineering Officers of Industries and Sericulture Departments. Discussion on the procedure to be adopted for future meetings and the mode of dealing with the replies to the questionnaire. Consideration of letters received from Government. Drawing up of the questionnaire II for the various Officers of Public Works Department.
V 24-3-1958 and 25-3-1958	Confirmation of the minutes of the Fourth Meeting of the Committee. Interviews of: Shri H. Ananthachar, Chief Engineer (Retd.), Bangalore. The Deputy Chief Engineers. The Superintending Engineer, Bangalore Circle, Bangalore. The Executive Engineers, Buildings Division, Bangalore, and Vidhana Soudha Division, Bangalore, and The Government Architect.

Meeting and date	Business transacted
VI 15-4-1958 and 16-4-1958	Confirmation of the minutes of the Fifth Meeting of the Committee. Interview of the Superintending Engineers.
VII 6-5-1958 and 7-5-1958	Confirmation of the minutes of the Sixth Meeting of the Committee. Discussion on items 1, 2, 3 and 6 of terms of reference to the Committee.
VIII 3-6-1958 to 7-6-1958	Confirmation of the minutes of the Seventh Meeting of the Committee. Discussion on the following subjects :— 1. Administrative Secretariat. 2. Recruitment. 3. Re-allocation of charges of the Chief Engineers. 4. Combining the offices of the Chief Engineers Major Irrigation (North) and (South), into one. 5. Major Irrigation. 6. Re-grouping of Circles and Divisions. 7. Establishment for the Chief Engineers, Superintending Engineers, Executive Engineers and Assistant Engineers. 8 Establishment for investigation of Projects to be included in the Third Five-Year Plan. 9. Municipal Engineers. 10. Establishment for the Miscellaneous works in the Chief Engineer's Office due to large scale activities at the Centre. 11. Assessment of Irrigation and Water Power Resources potential of River Basins. 12. Execution of works. 13. Powers of Officers. 14. Schedule of Rates. 15. Rural Water Supply. 16. Central Workshop for each Circle. 17. Government Architect and Director of Town Planning. 18. Accounts. 19. Stores. 20. Research Station. 21. Pay Scales. Discussion on the references received from Government.
IX 23-6-1958 to 26-6-1958	Consideration and finalisation of the Report of the Committee.

APPENDIX I-G.

List of persons who were interviewed by the Committee.

1. Shri H. Ananthachar, Chief Engineer (Retired), Bangalore.
2. Shri N. G. Joshi, Deputy Chief Engineer (Roads and Buildings), Bangalore.
3. Shri C. J. Venkatesh Das, Deputy Chief Engineer (General and Irrigation), Bangalore.
4. Shri K. Padmanabhan, Deputy Chief Engineer (Designs), Bangalore.
5. Shri M. V. T. Iyengar, Deputy Chief Engineer (M. I. S.), Bangalore.
6. Shri S. V. G. Iyengar, Deputy Chief Engineer, Sharavathi Valley Project, Bangalore.
7. Shri B. R. Manickam, Government Architect and Town Planning Officer, Bangalore.
8. Shri D. Doddiah, Research Officer, Mysore Engineering Research Station, Krishnarajasagar.
9. Shri A. Seshappa, Superintending Engineer, Bangalore Circle, Bangalore.
10. Shri M. S. Srouti, Superintending Engineer, Shimoga Circle, Shimoga.
11. Shri G. Krishnaswamy, Superintending Engineer, Cauvery Circle, Mysore.
12. Shri K. M. Joshi, Superintending Engineer, Belgaum Circle, Belgaum.
13. Shri L. T. Aminbhavi, Superintending Engineer, Raichur Circle, Yermarus.
14. Dr. A. S. Adke, Superintending Engineer, South Kanara Circle, Mangalore.
15. Shri I. M. Magdom, Superintending Engineer, Karnatak Irrigation Circle, Dharwar.
16. Shri M. A. Subhan Khan, Superintending Engineer, Tungabhadra Project Circle, Munirabad.
17. Dr. Ansari, Superintending Engineer, Local Government, Gulbarga.
18. Shri Sundaram, Executive Engineer, Buildings Division, Bangalore.
19. Shri M. B. Krishna Iyengar, Executive Engineer, Vidhana Soudha Division, Bangalore.
20. Shri H. G. Abdul Hameed, Executive Engineer, Industries Division, Bangalore.
21. Shri Parasivamurthy, Executive Engineer, Sericulture Division, Bangalore.
22. Shri K. S. Rajashekhariah, Executive Engineer, Sanitary Division, Bangalore.
23. Shri K. J. Rangachar, Executive Engineer, Sanitary Division, Mysore.
24. Shri D. Gopalakrishnachar, Executive Engineer, Water Supply Division, Bangalore.
25. Shri H. S. Narayana Rao, Executive Engineer, Special Water Supply Division, Bangalore.
26. Shri Mahantannavar, Executive Engineer, Public Health Division, Belgaum.

27. Shri S. P. Nanjundappa, Chief Accounts Officer to Chief Engineer (General).
28. Shri T. C. Channabasappa, Financial Assistant to Chief Engineer (General).
29. Shri K. Parthasarathy, Controller of Central Stores.
30. Shri B. Shadaksharaiah, Assistant Engineer, Central Stores Sub-Division.

APPENDIX II-A.

Extracts from the Sixth Report (October 1957) *of the Estimates Committee of the Madras Legislative Assembly on the Public Works Department (Buildings).*

The jurisdiction of some of these Superintending Engineers and Executive Engineers in the same department extends to two or more districts. In some cases, as in the Sanitary Engineering Department, it extends to a vast area covering several districts, in which case they are not able to give sufficient attention to the works in their charge, in view of the distance involved, and the progress of work is handicapped for want of their decision after inspection of the spot on certain points that may arise in the course of execution of the work.

There is also overlapping of the jurisdiction of the Superintending Engineers in charge of different branches so much so that in some cases they cover the same area........

The Committee understands that the division of the department into separate branches on a functional basis as Public Works Department (Buildings), Public Works Department (Irrigation), Public Works Department (Highways), etc. .... is not also conducive to expeditious execution of work and that there is lack of co-ordination among these branches.

Besides, special circles are formed for new major works and the permanent circles are mainly concerned with maintenance and minor works.

The Committee having considered the defects in the existing system as explained above, is of the view that it is possible to combine all these functions, *viz.*, Buildings, Irrigation, Highways, Public Health, Minor Irrigation, Community Projects, Food Production and Rural Water Supply Works and Civil Works of the Industries Department on a *territorial* basis under a Superintending Engineer as district level, and with Chief Engineers at top level to guide and co-ordinate their work. The Committee is of the view that even Panchayat and Municipal works may be included in the new set up. The Superintending Engineer may, if necessary, function as the Chief Technical Adviser to the Collector.

* * * *

Within a circle, two taluks may be formed into a division and an Executive Engineer may be in charge of all the maintenance and ordinary works in that division. Each division may be subdivided on territorial basis and an Assistant Engineer may be put in charge of a sub-division. The same principle will apply to Junior Engineers and Supervisors. In the case of special works in a circle, special divisions may be created and attached to the territorial circle concerned. The same principle will apply to the Special Sub-Divisions and sections.

APPENDIX II-B.

Extracts from the Public Works Department Reorganisation Committee's Report of Travancore-Cochin—1956-57.

.. .. The essential criterion for the distribution of the Divisions should be territorial and *not functional.* Most of the Executive Engineers interviewed in Madras and Mysore, and also many in this State, were strongly of the opinion that a compact jurisdiction for Division, Sub-Division and Section will go a long way in improving the efficiency of the Department. Extensive jurisdiction tends to dilute supervision and concentration of attention on works and naturally therefore reacts on the efficiency of the Department. Moreover in this State, irrigation and communication works are not so extensive as to justify separation of these works and organising them as separate units, *viz.*, Divisions and Circles, for the execution of such works, except where the work-load will justify formation of such units. The advantages accruing from the Divisions with limited jurisdiction would far outweigh the advantages from the formation of Divisions and Circles on a functional basis, and where both of them cannot be secured. In this State also composite Divisions and Circles may be formed where, however, Divisions cannot be formed on the basis of work-load alone with limited jurisdiction.

* * * *

In Madras, there are two distinct Departments looking after (1) Buildings and Irrigation works, and (2) Communications. They are effectively separated in all respects and are administered as two distinct branches. There are Divisions attending to both irrigation and building works, purely irrigation Divisions and also Divisions attending to buildings works only.

The separation of communication work has been possible in Madras due essentially to the fact that the Communication Branch took over the construction and maintenance of roads belonging to the District Boards and other Local Bodies. In Madras, both irrigation and buildings are intimately mixed and as such separation will result in increasing the establishment and formation of uneconomic Divisions with wide jurisdiction.

In Mysore also no such distinction has been made. Works relating to buildings, irrigation and communications are entrusted to all Divisions. But this does not preclude formation of separate Divisions where works of magnitude are taken up which justify the formation of such Divisions. The pattern in this State is more or less analogous to that in Madras, except for a distinct branch for communications; but the works of the communication branch do not justify the formation of a separate wing. It is also not desirable to form distinctly separate Divisions for executing irrigation works.

.. .. After considering all points, it is desirable to form *composite territorial Divisions,* combining building works, communication works and medium irrigation works so that each Division may be compact instead of having wide jurisdiction, and it should not be entrusted with a work-load is more than it can manage.

APPENDIX II-C.

Extract from the reply of Shri P. V. R. Rao, Chief Secretary to the Government of Mysore, to the Committee's Questionnaire.

** ** ** ** **

2. *Organisation.*—The division of the Department into separate compartments such as Highways, Buildings, Irrigation, Public Health Engineering, etc., from *top to bottom* is not sound. The reasons are :—

(*a*) The country is already short of technical personnel. There are not many 'specialists' at all levels in the different fields to enable specialist cadres from top to bottom to be built up.

(*b*) Persons with practically the same qualifications will be recruited to the different cadres. The prospects of service in such different cadres will vary widely, with consequent unnecessary discontent among Government employees.

(*c*) The difficulty mentioned above is particularly important in the present context when the first step will have to be the division of existing cadres into different cadres. The Departments are likely to get more involved in settling 'service' matters instead of carrying on with their work.

(*d*) Broadly speaking, at present there is a suppliers' market whether for contractors, for labour or for materials. Independent set-ups will create further competition *inter se* among Government departments with ill effects on the rates and costs of execution.

(*e*) The technical skills are no doubt getting specialised but this is mainly in planning and designs. Specialists' sections at the top should be set up for the different types of work for 'Surveys, planning, designs'. This may be normally at the State level and for some types of work, even at the Circle level.

3. The whole problem could be looked at from another angle. It should be possible to work out a work-load for each division with a standard complement of staff, indicating roughly the 'new works' load and 'maintenance' load. A rough ratio between one another could also be established. With this data, it should be possible to determine the total number of divisions the State needs.

An Assistant Engineer can normally be exempted to tour without difficulty in a radius of 10-15 miles, according to the nature of the terrain and the communications available. If within that area, the concentration of work is not great enough to justify two Assistant Engineers, there is no particular reason why merely by dividing the work into different compartments two Assistant Engineers should be appointed to a wider geographical charge ; or, what may often happen, the Assistant Engineers given a subnormal work-load. A large geographical charge involves :

(i) less intensive supervision ;
(ii) waste of time in travelling ; and
(iii) waste of money on Travelling Allowance.

If in particular areas of intensive work, the load of work is so heavy that it may be possible to have a separate Assistant Engineer to look after, for example, Minor Irrigation works only for a building project, a separate unit may be established but there should not be separate cadres.

4. *Engineering works in autonomous or local bodies*:—Government cannot compel an autonomous body to utilise the Public Works Department. Also an autonomous body with any significant volume of work can have its own engineering service at a cheaper cost than the Public Works Departmental charges. As regards different departments of Government, it is not, for reasons given above, desirable to have independent Engineering services; but steps will have to be taken by the Public Works Department to see that the works of individual departments are not neglected. The main reason why there should not be a separate departmental organisation is clear from the question which has been asked 'whether lending of officers from the Public Works Department to work in other Departments will affect efficiency'. In my view it will.

5. At the State level, there should be a Costing and Estimates Section equipped with adequate staff of Engineers, Accountants and Statisticians. The job of this organisation should be:—

(*a*) to analyse tenders received and accepted from time to time and to have rates tabulated for different types of work;

(*b*) to analyse data rates sanctioned from time to time both with a view to see whether any of them could be standardised and included in the schedule of rates and for the purpose of comparative study;

(*c*) to analyse costs of departmental working;

(*d*) to keep the schedules of rates under continuous revision with a view to make it realistic;

(*e*) to make a comparative study of cost of materials to ensure proper utilisation of materials and economy of funds.

6. There should be a Central Stores Organisation as also a Central Accounting Organisation. The Stores Organisation should perhaps be in charge of an Engineer with a proper complement of Store-keepers and Accountants. It should be the responsibility of the Chief Accounts Officer who should have access to Government in the Public Works Department and in Finance Department independently of the Chief Engineer:

(i) to see that accounts are maintained up-to-date;

(ii) to scrutinise objections raised by Accounts Officers attached to different units and to take up the matter with the Chief Engineer and if necessary to bring to the notice of Government cases of material discrepancy;

(iii) to act generally as an internal Auditor both regarding accounts and efficiency;

(iv) in particular, scrutinise cases of revised estimates which exceed initial estimates beyond a prescribed limit to see whether the causes of excess were within the control of the Enigneers or were beyond their control.

With regard to the former, there are likely to be difference of opinion which could be thrashed out in a Committee consisting of this Officer, Secretary, Public Works Department, and the Chief Engineer, the Committee co-opting where necessary one or two technical experts from outside;

(v) delays in payment of bills, finalisation of accounts, purchase of useless or superfluous stores, would all come within the purview of the Chief Accounts Officer whose responsibility it will be to bring them to the notice of Government;

(vi) an Unit under this Officer should also make, at odd intervals, a physical check of stores.

7. A point for consideration is whether there should be a number of Chief Engineers. Apart from technical supervision over big projects, Government should be able to look to one Head of Department only for advice and administration of common items—*e.g.*, Personnel, Stores, Equipment, Accounts, etc. Thus, there could be an Engineer-in-Chief on Rs. 1,600—1,800 or Rs. 1,800—2,000 who will be the Head of the Department and Project Chief Engineers for big Projects in the present Chief Engineer's pay who will be responsible for specific projects only and should have full powers in respect of the projects. The Planning, Designs and Estimates Sections would be under the Engineer-in-Chief while where necessary big projects may have sections thereof attached to them.

8. Based on the load of work as defined by sanctioned estimates within budget allotment, the requirement of staff should be calculated and about 75 per cent to 80 per cent thereof should be made permanent. Promotion from Executive Engineers to Superintending Engineers cadre should be dependant apart from other factors on satisfactory performance *re*: (a) estimates, (b) spending of grants and (c) quality of works executed.

9. For the Survey, Planning and Designs Section to be successful, the staff should be specially chosen and remunerated by suitable special pays.

10. Contractors should be classified and registered. Performance of work of contractors should be watched both with a view to quality and to adherence to time schedule and a record thereof kept. Special facilities regarding earnest money (*e.g.*, an overall bank guarantee instead of earnest money against each contract), a ceiling limit to bills outstanding, etc., must be provided. I am not in favour of the demand for arbitration put forward by some contractors. A contractor is entitled to have a final settlement of his claims in time; where there is delay beyond a specified time, the contractor should be able to put up his claim before a Board to be set up for the purpose (consisting of Secretary, Finance Department, Secretary, Law, Secretary, Public Works Department, and Chief Engineer) which should be enjoined to give a final decision within 60 days, failing which interest would be payable. The Board should naturally give the best decision on the material available, as the aggrieved party can always go to Court, if dissatisfied.

APPENDIX III.

Extracts from the Fourth Report (1956-57) *of the Madras Legislative Assembly Committee on Estimates, on the Sanitary Engineering Department, Madras.*

The Committee first examined the Secretary to Government, Public Works Department, and the Additional Secretary to Government, Health, Education and Local Administration Department, as regards the question of combining the designing and execution work in one and the same department. The Chairman explained that at present the designing is done by the Sanitary Engineering Department, and the execution by the Public Works Department through a Superintending Engineer, the Chief Engineer having the over-all control of both these departments.

The Secretary to Government, Public Works Department, was of the opinion that designing and execution must be separated from one another. To question from the Finance Minister whether there was any need for a separate Sanitary Engineering Department with a Chief Engineer, the Secretary stated that there was no need for a separate branch at present and that the volume of work does not warrant it. He also stated that if designing and execution were to be in one and the same hand it was likely that any defects in designing would be glossed over and that no check against faulty designing would be possible.

* * * *

Finance Minister explained that the designing required expert knowledge, skill and experience and the energy and talents of the designer should not be wasted on execution.

The Secretary, Public Works Department, said that there has been satisfactory progress after the designing and execution were bifurcated.

The Committee then examined the Sanitary Engineer who was of the opinion that it would be better if the designer had a hand in execution also to facilitate quicker and efficient execution. He added that in water supply schemes designing was a special feature and one could not design fool-proof, fit to be given to the field staff. But the Committee felt that that could be done by co-ordination between the two departments and if any defects were noticed during execution, the designer should be consulted. Interchange of staff between investigation, designing and execution at the lower level was absolutely necessary. The Committee then heard the Chief Engineer (General and Buildings) and the Chief Engineer (Irrigation). The Committee felt that the practice of scrutiny of designs which were prepared by the Sanitary Engineer at the lower level in the Chief Engineer's office and in the Secretariat should be avoided as no useful purpose would be served by it and that it caused unnecessary delay. Scrutiny at the higher level alone would be sufficient and it would accelerate the work.

The Superintending Engineer (Execution), who was examined in this connection, stated that, even if there were certain defects in designing, it could be rectified during execution. The Chief Engineer (Irrigation) stated that in America designing and execution were under two separate departments and that they were working satisfactorily.

APPENDIX IV—A.

Area under irrigation by sources.

The total irrigated area in the State in 1955-56 is 1,739 thousand acres, comprising of 368 thousand acres (or 21 per cent of the total irrigated area) irrigated by Government canals, 11 thousand acres (or 0·6 per cent) by private canals, 777 thousand acres (or 44 per cent) by tanks, 322 thousand acres (or 18 per cent) by wells and 261 thousand acres (or 16 per cent) by other sources. More than 50 per cent of the total area irrigated by Government canals is spread over in Mysore and Mandya districts, and 34 per cent of the total area irrigated by tanks are found in Shimoga and Dharwar districts. In Bijapur district about 53 thousand acres are being irrigated by wells. The district-wise details are as follows:—

(*In thousand acres*).

	District		Area Irrigated by					
			Government Canals	Private Canals	Tanks	Wells	Other sources	Total
1	Bangalore	...	4.0	...	62.0	20.0	4.0	90.0
2	Kolar	...	0.3	2.0	72.0	31.0	4.0	109.3
3	Tumkur	...	3.0	...	75.0	32.0	3.0	113.0
4	Mysore	...	85.0	...	18.0	0.8	3.0	106.8
5	Mandya	...	108.0	...	25.0	...	2.0	135.0
6	Hassan	...	17.0	...	64.0	...	16.0	97.0
7	Shimoga	...	44.0	0.3	159.0	0.6	1.3	205.2
8	Chikmagalur	...	21.0	...	44.0	0.2	103.0	168 2
9	Chitradurga	...	19.0	1.0	41.0	32.0	3.0	96.0
10	Bellary	...	18.0	...	15.0	7.0	2.0	42.0
11	Dharwar	...	8.0	...	109.0	5.0	3.0	125.0
12	Belgaum	...	20 0	6.0	16.0	73.0	6.0	121.0
13	Bijapur	...	2.0	..	1.0	53.0	0.3	56 3
14	Bidar	...	...	...	0.3	26.0	0.6	26.9
15	Raichur	...	10.0	...	11.0	2.0	5 0	28.0
16	Gulbarga	...	0.3	...	12.0	29.0	2.0	43.3
17	South Kanara	...	...	...	14.0	6.0	80.0	100.0
18	North Kanara	...	...	1.0	34.0	4.0	17.0	56.0
19	Coorg	...	8.0	...	5.0	...	7.0	20.0
	Total	...	367.6	10.3	777.3	321.6	262.2	1739.0

(Source—Department of Statistics, Bangalore.)

APPENDIX IV—B.

Typical Set-up for Gauging Establishment for:

One Division		One Sub-Division		One gauging Station	
Executive Engineer	1	Assistant Engineer	1	Gauge Reader	1
Supervisors	3	Supervisors	4	Assistant Gauge Reader	1
Accountant	1	Sub-Overseers	4	Lineman	1
Accounts Clerks	2	Accounts Clerk	1	Boatman	1
I Division Clerk	1	II Division Clerks	2	Watchman	1
II Division Clerk	1	Typist	1	Observation Coolies	6
Steno-typist	1	Assistant Draftsman	1		
Draftsman	1	Tracer	1		
Assistant Draftsman	1	Attender	1		
Tracers	2	Peons	2		
Attender	1				
Peons	3				

Equipment and Accessories for gauging in Divisions and Sub-Divisions.

Theodolite	for the Division.
Current Meters	4 for each Station.
Leather Boats	2 for each Station.
Crab winch	1 for each Station.
Cradle	1 for each Station.
Trestles, Anchor and Cable	One set for each Station.
Levelling instrument and compass.	One set for each Station.
Metallic tapes	Two for each Station.
Steel tape	One for each Station.
Two Levelling staves and 4 Ranging rods	Two sets for each Station.
Chain	One set for each Station.
Gauge posts, and Gauge plates	......
Pulley blocks	......
Sounding rods	Two sets for each Station.
Typewriters	One for each Division and Sub-Division.
Jeeps, steel almirah, cash boxes, iron safes, furniture, Cycle, steel rack, mathematical instruments and special stationery.	......
Tents	One for each Station.

Constructions.

Gauge Reader's quarters; Watchmen's quarters: Winch Shed: Gauge Well.

APPENDIX IV—D.

Scales of Pay of Officers of the P.W.D. in the different portions of the Integrated State of Mysore.

Designation of Officer	Common scale recently sanctioned for Mysore	Madras	Hyderabad	Bombay
	Rs.	Rs.	Rs.	Rs.
1. Chief Engineer ...	1,200–50–1,500	1,500–150/2–1,800	1,500–75–1,800	1,800–100–2,000
2. Superintending Engineer ...	800–40–1,000–50–1,200.	1,000–100/2–1,200	1,200–50–1,400	1,300–60–1,600
3. Executive Engineer ...	550–30–700–40–860	500–50/2–850 (Ordinary Grade) 800–100/2–1,000 (Special Grade)	600–30–720–40–1,000.	500–30–650–45–1,100.
4. Assistant Engineer 5. Deputy Engineer	250–25–450–30–600	260–30/2–380–40/2–500	250–450 (450–25–550 Selection Grade).	220–15–400–20–500–25–650.
6. Supervisors ...	150–10–300	100–5–150–10–250	...	80–5–100–8–140–10–200–10–270.
7. Overseer ...	120–10–200	...	140–4½–176–6½–250–8½–300.	80–5–100–8–140–10–200–10–270.
8. Sub-overseer ...	70–5–90–6–150	...	90–3–105–3½–140	...

APPENDIX V-A.

D.O. No. 264/W.M./Gc2/XVII.

OFFICE OF THE ACCOUNTANT GENERAL, MYSORE.

Bangalore, dated 19*th December* 1957.

MY DEAR SRINIVASACHAR,

SUBJECT :—*Changes in the system of Public Works Accounts—Suggestions for improvement.*

Kindly refer to Srikantiah's D.O. No. PWD. 489/PWG/51, dated the 5th December 1957 on the above subject. I enclose a note containing my suggestions for the changes in the procedure for accounting that may be considered by the Committee.

I would, however, add that the difficulties experienced in the course of audit arise not so much out of any inadequacy in the existing rules, as from the failure on the part of the Divisions to follow these rules. The suggestions contained in the note are therefore only for changes of a procedural nature and I cannot frankly state that even with these changes things would improve considerably.

I feel what is urgently required is a system by which the Divisional Accountants and their staff would be trained well enough to discharge their duties with full competence. Further, a system should be devised in which it should be possible without much circumspection and delay to enforce the duties of the Divisional Accountants in the maintenance of accounts as well as in the submission of the returns to the Audit Office. Much of the correspondence with Government on the Public Works Accounts is regarding the non-submission of returns in time or their submission in an incomplete form. My view is that efficiency in this behalf can be achieved only if my office has supervisory control over the Divisional Accountants' Cadre.

The recent decision of Government to transfer the Cadre of Divisional Accountants to the control of the Controller of State Accounts Department leaves the Divisional Accountants responsible neither to the Executive Authority, the Chief Engineer, nor to the Accountant General. The delay in the submission of important account records itself (which in some cases goes back to five years) leads to grave irregularities not being detected and remedial action not being taken in time. Further defects in procedure continue to persist because of the late submission of returns. Inspection reports issued as early as in 1951 have not in several cases been finally settled due to delay in giving final replies to the points raised therein. It has also been observed that irregularities in procedure pointed out to the Divisions in the course of an inspection remain unremedied and are noticed during subsequent inspections.

I feel that the Divisional Accountants can be made to realise their responsibility and to respond to the observations and enquiries made by my office and by my Inspecting Officers, only if my office which receives the accounts and scrutinises them has administrative control over the Divisional Accountants. I would therefore strongly urge that Government may kindly reconsider their views in regard to the control of the Divisional Accountants and consider whether in the interest of greater efficiency the Divisional Accountants may not be placed under my administrative control. I would also add that in all the States other than Ex-Hyderabad and Ex-Mysore States, the Divisional Accountants' Cadre has all along been under the administrative control of the Accountant General and the system has worked very satisfactorily. It has been recently decided by the Comptroller and Auditor General of India also that the Divisional Accountants should be placed under the control of the Accountant General *vide* in this connection my D.O. No. C-9—420, dated 5th September 1956 to Shri Kadilal Manjappa the then Chief Minister. I therefore, feel that if the Divisional Accountants' Cadre were not placed under the administrative control of the Accountant General, the changes in the accounting procedure and other reforms will still leave much to be desired in the condition of initial accounts at the Divisions and the accounts submitted to my office.

Yours sincerely,

(Sd.) P. K. SEN.

Shri D. K. Srinivasachar, I.A.S.,
Secretary to Government,
Public Works Department, Bangalore.

SUBJECT :—*Changes in the system of Public Works Accounts—Suggestions for improvement.*

A primary requirement of the system of drawal of funds from and remittances into the treasuries in lump is the need for effecting a monthly settlement with treasuries which if not systematically done, will lead to loss of public money being undetected. The Divisional Officer has to obtain from the treasuries a consolidated receipt for the remittances made by him and a consolidated certificate of issues with reference to which he should reconcile his own remittances and withdrawals. This reconciliation is not being done satisfactorily. The main reason contributing to the delay in reconciliation is the misclassifications by the treasury officers and the delay on their part to furnish the required certificates. Some Divisions have not submitted the Schedule of Settlement with treasuries for over five years. A system of personal reconciliation of the remittances made into the treasury by the Division is suggested for adoption. A clerk of the Division Office may be deputed to go over to the Treasury on specified dates and may be asked to effect the reconciliation by a reference to the Treasury records.

2. A notable feature of the working of the Divisions of the Ex-Mysore State is that most of the payments are made only in the Division Office after pre-audit though the Sub-Divisional

Officers also are empowered to draw cheques and make payments without pre-audit of certain classes of bills *vide* G.O. No. PWD. 3489-90, dated 25th July 1956. This will engage a substantial part of the attention of the Divisional Accountant who has to exercise a 100 per cent check of the transactions of the Division Office. Further, the preparation of the Works Abstracts which have to be posted from the cash book vouchers, etc., will have to be done in the Division Office itself. This system centralises all the work relating to cash accounts in the Division Office. If the Sub-Divisional Officers are asked to make payments of the bills without pre-audit by the Division Office in all cases where they are authorised to do so, the work would be distributed to some extent and the Divisional Accountant and the Accounts Staff in the Division can devote more time for the proper compilation of accounts and the check of the accounts rendered by the Sub-Divisional Officers. Incidentally, it may be considered whether the existing powers delegated to Sub-Divisional Officers themselves cannot be enhanced to be on a par with those obtaining in the merged areas of Bombay and Madras. According to para 296 of the Mysore Public Works Account Code the officer who passes the bill after audit should also draw the cheque. This does not appear to be necessary. Even the bills pre-audited in the Division can be sent for payment to the Sub-Divisional Officer who will be in a better position to deliver the cheque and obtain acknowledgment. Such a procedure would also decentralise the preparation of works Abstracts, which, under the existing practice, will have to be prepared even in the Division Office. This would, however, necessitate the posting of a Senior First Division Clerk to the Sub-Division.

According to the same para, *viz.*, para 296 of the Mysore Public Works Account Code, bills have to be prepared in triplicate. The need for this is stated to arise from the fact that the abstract of the measurements recorded is not written up in the measurement book. The preparation of such an abstract will be a great improvement on the existing procedure. It will help the person recording the measurements to re-check the entries and will be an effective safeguard against double payments which are detected occasionally by my office in the course of the audit of bills. Further, it is undesirable for obvious reasons to prepare more than one bill for the same work or supply. If the procedure of recording the abstract in the Measurement Book is introduced, the Division Office need prepare only one bill and thus there will be decrease in the routine work in that office.

There are quite a large number of works held under objection for want of estimates, among which are included works for annual repairs to buildings. The present procedure requires that an estimate has to be prepared for the annual repairs of each building for each year. According to para 106 of the Central Public Works Department Code, an extract of which is enclosed, a lumpsum amount is fixed for the annual repair of each building and got approved by the competent authority and this is treated as a standing estimate subject to revision at periodical intervals (once in five years or such other period as may be fixed by Government).

This would minimise the number of objections under 'want of estimates' and the time saved could also be spent on the preparation of other estimates. It is also desirable that the execution of annual repairs to non-residential buildings is entrusted to the departments occupying the buildings as such annual repairs do not require any technical skill. Even small original works upto a certain limit may perhaps be entrusted to the occupying departments to relieve the Public Works Department from the execution of minor works of ordinary nature so as to enable them to concentrate on more important works. At present this is permitted to the Police, Forest, Agriculture and some other departments to a limited extent, *vide* para 115 of the Mysore Public Works Department Code. The extension of this facility to other departments may be considered.

5. The annual repairs to buildings are of a recurring nature and measurements of the several items of work executed from year to year would remain the same. As per para 120 of the Mysore Public Works Account Code detailed measurements may be dispensed with under the sanction of Government in the case of periodical repairs when the quantities are recorded in efficiently maintained standard measurement books. It is seen that these standard measurement books are not maintained at all in most of the Divisions and measurements are taken every time repair work is done. It is desirable that the maintenance of the standard measurement books and payments based on them are made the rule rather than the exception. Reference is invited to para 210 of the Central Public Works Account Code prescribing the maintenance of standard measurement books. Similar rules may be made here also.

6. The irregularities in the Stock Accounts are considerable. It is seen that materials are stocked mainly with the object of supplying them to contractors or piece-workers. In all these cases it would be more advantageous if the contracts are given on a finished rate basis, the contractor or piece-worker himself being required to procure the required materials. Materials may be stocked only in respect of controlled articles like cement steel, etc., which the contractors or piece-workers will not be in a position to procure. This would reduce the quantity and number of items. Incidentally this would also reduce the number of works for which materials-at-Site Accounts have to be kept or the number of items in those accounts where such accounts are kept.

Extract of para 106 from the Central Public Works Department Code.

106. In the case of any building, the cost (excluding municipal taxes) of the ordinary annual repairs to which is less than Rs. 2,500 the Superintending Engineer may prescribe, subject to revision from time to time, a lump sum limited to Rs. 2,500 (*plus* the amount of the municipal or other taxes, if any, payable by Government) for any one building, to cover the cost of maintenance and within this amount expenditure will be permissible without any detailed estimate being prepared.

APPENDIX V-B.

CADRE FOR STORE-KEEPERS.

	Rs.
(1) Senior Store-keeper	150—10—250.
(2) Junior Store-keeper	100—5—150.
C.A. for the Store-keepers of Water Supply Division and Central Stores ..	Rs. 25 per mensem
C.A. for the Store-keepers of other Divisions	Rs. 10 per mensem

APPENDIX V-C.

Extract from the Ninth Report (1953-54) *of the Estimates Committee of the Lok Sabha, regarding Administrative, Financial and other Reforms.*

II

FINANCIAL PROCEDURE.

* * * *

* * * *

The Committee make the following recommendations :—

(i) Before a scheme is embarked upon, it should be properly planned and it should also be ascertained whether the money required for it is available or can be made available at the proper time. Detailed plans and estimates should be worked out fully so as to enable the Ministry of Finance to approve the scheme and accord financial concurrence.

(ii) After the scheme is concurred in from the financial point of view, by the Ministry of Finance, the detailed execution of the scheme and spending of money thereon should be the responsibility of the administrative Ministry concerned which should also be given power to vary or alter the amounts under the subheads of the scheme so long as the total outlay is not affected.

In practice, the procedure will be as follows :—

Each Ministry should prepare its Budget in as detailed a manner as possible and work out the details of all schemes to be executed by the Ministry in the following financial year. At present, the Budget Estimates for the following financial year are prepared towards the middle of the current financial year and are broadly stated. The Budget Division of the Ministry of Finance receives the various proposals from the Ministries in one lump during one or two months towards the close of the financial year. Consequently, the Budget Division does not have sufficient time to examine the proposals in greater detail and to scrutinise each and every item carefully. The practice has, therefore, been that the Budget Division applies broad checks and determines certain gross amounts for the various schemes without committing itself or the Ministry of Finance to their spending during the next financial year. The system is that whatever has been included in the estimates is merely with a view to get the vote of the House thereon and does not entitle the administrative Ministry to incur expenditure unless a detailed expenditure sanction has been issued by the Ministry of Finance. This means that after the Budget is voted by Parliament and the financial year has set in the Ministry concerned begins to think of the proposals and to prepare detailed estimates and other justification for its execution. In this process, considerable time elapses before the Ministry of Finance and the administrative Ministry agree to proceed with the scheme. After the administrative Ministry has got the concurrence of the Ministry of Finance, it then sets about to get the necessary manpower, the sites, the buildings or other equipment which in turn take their own time under the complicated rules of the machinary of Government. The result is that by the time the Ministry prepares to start a scheme or to go ahead with it, a good part of the year is already over and it is suddenly found at the end of the year that they must spend the money quickly for fear that the non-utilised funds may lapse or that they may have to approach again the Ministry of Finance for including the amounts in the Budget and according fresh expenditure sanction. It appears to the Committee that this procedure is, to say the least, irksome, wasteful of time and money and hampers intiative. There is no reason why the spending Ministry should not prepare schemes in as great a detailed manner as possible and chalk out clearly a time-table for its execution with total outlay required, the phases in which it will be spent and in short prepare a complete blueprint before approaching the Ministry of Finance for sanction. The Ministry of Finance should examine the schemes as a whole and offer their advice not from a negative aspect but with a positive approach inasmuch as that Ministry should suggest alternative methods whereby the scheme could be put into effect at a less cost or more efficiently. After the administrative Ministry and the Ministry of Finance have approved the scheme, it should be included in the Budget Estimates of the Ministry concerned; and thereafter there should be no further expenditure sanction or embargo on reappropriations within the various sub-heads of the scheme so long as the total amount of the scheme is not exceeded. In case, the plan has to be revised and further money is required, the concurrence of the Ministry of Finance should be obtained before the additional money needed for the scheme is included in the Budget or Supplementary Estimates.

6. The spending Ministry should go ahead with the scheme as planned and should take such administrative and financial advice within the Ministry itself as may be necessary from time to time. This will eliminate all kinds of delays that at present occur in the preparation and execution of the schemes or the scheme being held up for want of expenditure sanction to a small item or delay which may take place in referring the papers to and from.

7. It is evident that there is not adequate planning in the actual day-to-day work of the Ministries. Most of the schemes

are not conceived in all their aspects in advance and the administrative Ministries develop, change and recast their ideas after the schemes are initiated. This, in the opinion of the Committee, is a factor which leads to so much delay and wasteful expenditure and makes the scrutiny of the Ministry of Finance essential from time to time. If the administrative Ministry prepared all the schemes, in as complete a manner as possible, there is little doubt that it will give a tremendous fillip to the activity of the country and the work being done efficiently and economically.

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PREPARATION OF ESTIMATES FOR WORKS.

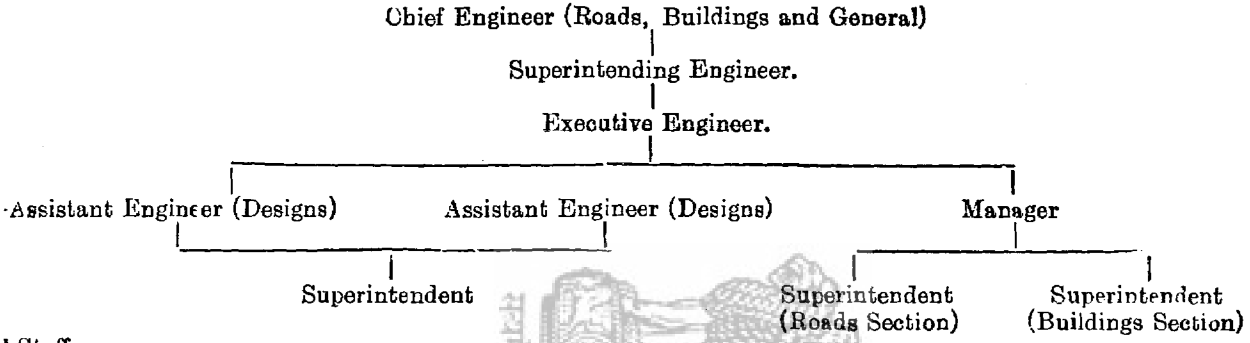
11. The Committee have observed in their earlier reports that there is at present a tendency to sanction or start works without preparing technical blueprints and detailed estimates of cost. This has led to grevious losses in some cases. There are also instances where projects or schemes had been abandoned on account of the technical defects which were found much later after the work had been started and had made considerable progress. Such instances, though they may be on a small scale, depict a tendency which may ultimately prove dangerous if it is not checked now. It is important that public confidence is not shaken as a result of these defects which can very easily be rectified. There is no reason why it should not be insisted upon that before a work is started, a complete blueprint and detailed estimates are drawn up. When we are trying to marshal our resources to our needs laying down priorities and trying to live within our own resources, it is imperative that planning must be introduced, observed and insisted upon even to the smallest detail. An overall planning has no meaning if the small schemes that go to make the big schemes are not dealt with in the same manner and planned in the minutest details. In fact, if this requirement is complied with, there is very little doubt that there will be very few delays and very little need for any stricter financial control. Schemes are started merely on the basis of guess work and approximate costs that they would involve. This necessitates frequent revisions of schemes and estimates, consultations and vexatious delays. On the other hand, if the schemes are thought out in all their details in advance and reliable data and expert advice obtained, the many bottlenecks that occur at present in completing schemes according to schedule and costs will altogether disappear. Not only are not the schemes properly planned and estimates prepared in advance, but there are cases where actual expenditure far exceeds the estimates or the schemes are subjected to frequent changes and involving first, second, third, etc., revised estimates.

The Committee feel that it is because of this inherent defect in the system at present that many of the development schemes are not making rapid progress. The Committee suggest that the Ministry of Finance should maintain a complete record of schemes in which the detailed estimates or blueprints are not prepared in advance or which are subjected to frequent changes in the course of execution or where actual expenditure exceeds the original or revised estimates. The statement should be periodically laid before the Committee for examination so that the Committee may watch what progress has been made in this direction and also what further steps are necessary to remove the defects to introduce a greater efficiency in the system.

LAPSING OF GRANTS

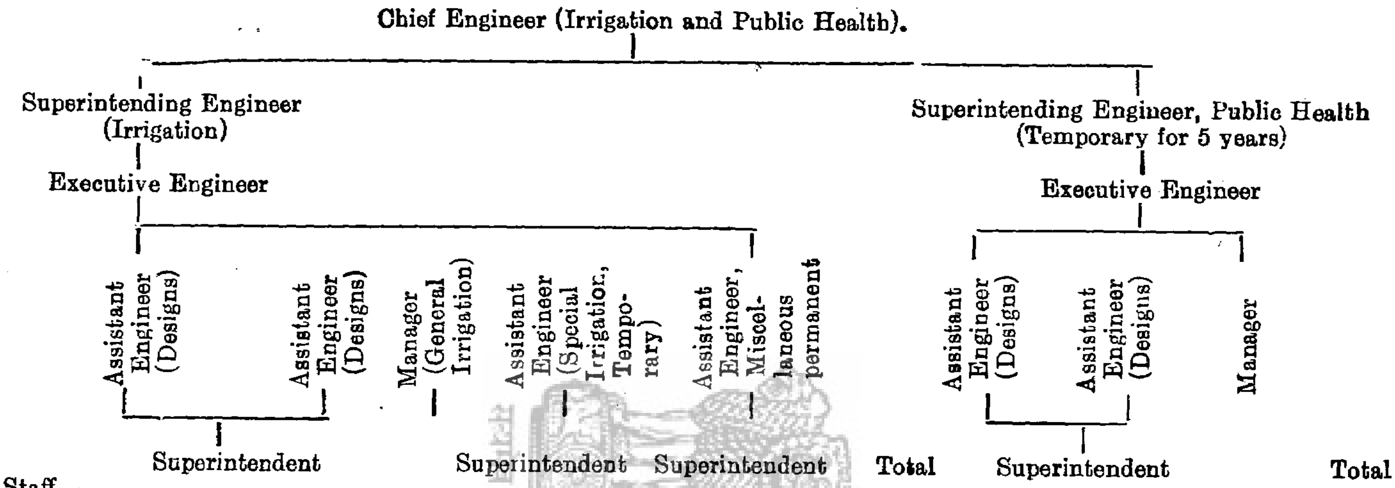
12. Allied to the point discussed in the last paragraph is the question of lapsing of funds under various Grants which are concerned with provision of supplies and services or works. The Prime Minister has himself remarked that there is no reason why funds allotted for a particular Department or Service should not be spent fully. It will be saying too much that all this is due to the present system of financial scrutiny. The causes are perhaps deeper inasmuch as the administrative Ministry concerned does not properly prepare plans in advance and is not ready with the execution of those plans in time. The Committee have come across many cases in which schemes are started without technical or administrative personnel being in position or without arranging for sites, buildings and equipment. The plans are not properly fixed and the priorities are not properly laid down so that the whole thing starts in the haphazard manner and there occur bottlenecks when it is suddenly found that essential links are missing. It is imperative that all schemes are thought out with utmost details by the administrative Ministries concerned and these are properly phased and priorities laid down. Thus it may be necessary in some cases to order for equipment first and to allow the necessary time factor before proceeding to recruit administrative and technical personnel. Similarly, it may take some time to recruit the necessary personnel before the scheme is actually commenced. It is, therefore, necessary that the Ministry concerned should assess the time that will be necessary for the completion of each part of the scheme and to order equipment and stores and to recruit necessary man-power according to the fixed timetable. If this is done, the moneys can be properly allocated for the completion of various phases of the scheme and the whole thing as it were will work smoothly and there will be very little danger that the funds might lapse. One obvious disadvantage of the present haphazard planning is that moneys are sanctioned on certain assumptions in a year. Those assumptions not being fulfilled, the money is either devoted to other subsidiary purposes which may crop up during the year and which may not be considered as essential or when the moneys lapse at the end of the year, the next year's programme suffers to a great extent inasmuch as either the scheme already sanctioned is abandoned or the new scheme will have to wait. India has embarked upon a vast programme of development touching every activity of the people and, therefore, Government cannot afford to be lax in matters of planning, proper phasing of plans and their execution in time. The Committee would like that the Ministry of Finance should maintain a complete record of instances where due to bad or no planning, funds had to lapse and place before the Committee, every year a statement showing the reasons in each case.

APPENDIX VI—A.


Chief Engineer (Roads, Buildings and General)
Superintending Engineer.
Executive Engineer.
Assistant Engineer (Designs)
Assistant Engineer (Designs)
Manager
Superintendent
Superintendent (Roads Section)
Superintendent (Buildings Section)

	Superintendent	Superintendent (Roads Section)	Superintendent (Buildings Section)	Total
Technical Staff—				
Supervisors	6	3	3	12
Head Draftsman	1	...	...	1
Draftsman I Grade	1	1	1	3
Draftsman II Grade	...	1	1	2
Assistant Draftsman	1	1	2	4
Tracers	1	1	2	4
Ministerial Staff—				
I Division Clerks	2	3	2	7
II Division Clerks	2	5	5	12
I Division Steno	1	1	1	3
I Division Typists	1	1	...	2
II Division Typists	...	1	1	2
Menial Staff—				
Attenders	1	1	1	3
Peons	2	3	2	7+2+3

APPENDIX VI—B.


Chief Engineer (Irrigation and Public Health).
Superintending Engineer (Irrigation)
Executive Engineer
Assistant Engineer (Designs)
Assistant Engineer (Designs)
Manager (General Irrigation)
Assistant Engineer (Special Irrigation, Temporary)
Assistant Engineer, Miscellaneous permanent
Superintendent
Superintendent
Superintendent
Superintending Engineer, Public Health (Temporary for 5 years)
Executive Engineer
Assistant Engineer (Designs)
Assistant Engineer (Designs)
Manager
Superintendent

	Superintendent (Assistant Engineers (Designs), Irrigation)	Manager (General Irrigation)	Superintendent (Assistant Engineer (Special Irrigation, Temporary))	Superintendent (Assistant Engineer, Miscellaneous permanent)	Total	Superintendent (Assistant Engineers (Designs), Public Health)	Manager	Total
Technical Staff—								
Supervisors ...	6	6	3	3	18	6	4	10
Head Draftsmen ...	...	1	...	...	1	1	...	1
I Grade Draftsman ...	1	1	...	1	3	1	1	2
II Grade Draftsman ...	1	1	...	...	2	...	...	...
Assistant Draftsman ...	1	1	1	2	5	2	1	3
Tracers ...	1	1	1	2	5	2	1	3
Ministerial Staff—								
Stenographers ...	1	1	...	1	3	1	...	1
I Division Typists ...	...	1	...	1	2	1	1	2
II Division Typists ...	1	1	2	1	5	...	1	1
I Division Clerks ...	2	4	2	2	10	2	3	5
II Division Clerks ...	2	5	3	3	13	3	4	7
Menial Staff—								
Attenders ...	1	1	1	1	4	1	1	2
Peons ...	2	3	2	2	9+4+2	2	3	5+4

APPENDIX VI—C.

Chief Engineer in charge of Establishment Portfolio.

	General Assistant (Establishment)		Financial Assistant		Office Assistant (Registrar)			
	Superintendent		Superintendent		Superintendents 2	Cash and Stationery		
	General Section	Pension Section	General	Budget and Accounts	Records Tappals Furniture and Library	C.E., R.B. and General	C.E., Irrigation and Public Health	Total
Typists—								
I Division ...	1	...	...	...	...	...	...	1
II Division...	2	2	1	2	...	1	1	9
Clerks—								
I Division ...	4	2	2	4	4	1	1	18
II Division ...	6	3	2	4	6	2	2	25
Attenders ...	2	1	1	2	2	1	1	10
Peons ...	2	1+1	1+1	2	2+1	1	1	13

APPENDIX VI—D.

SUBJECT No. 7.

Abstract of the Establishment Proposed for the Offices of the Chief Engineers.

Sl. No.	Designation	Recommended								Remarks
		Chief Engineer (Roads, Buildings and General).		Chief Engineer (Irrigation and Public Health)		Establishment, Budget and Records		Total		
1	2	3		4		5		6		7
		P	T	P	T	P	T	P	T	
1	Manager ...	1	...	1	1	...	...	2	1	
2	Superintendents ...	3	...	2	2	4	...	9	2	
3	I Division P.W.D. Clerks ...	7	...	8	7	18	...	33	7	

Appendix VI—D (*contd.*)

Sl. No.	Designation	Recommended								Remarks
		Chief Engineer (Roads, Buildings and General)		Chief Engineer (Irrigation and Public Health)		Establishment, Budget and Records		Total		
1	2	3		4		5		6		7
		P	T	P	T	P	T	P	T	
4	II Division P.W.D. Clerks	12	...	10	10	25	...	47	10	
5	Stenographers ...	3	...	3	1	...	...	6	1	
6	I Division Typists ...	2	...	2	2	1	...	5	2	
7	II Division Typists ...	2	...	3	3	9	...	14	3	
					...					
8	Head Draftsmen ...	1	...	1	1	...	...	2	1	
9	Draftsmen—I Grade ...	3	...	3	2	...	...	6	2	
10	Draftsmen—II Grade ...	2	...	2	...	...	...	4	...	

Appendix VI—D (*concld.*)

Sl. No.	Designation	Recommended								Remarks
		Chief Engineer (Roads, Buildings and General)		Chief Engineer (Irrigation and Public Health)		Establishment, Budget and Records		Total		
1	2	3		4		5		6		7
		P	T	P	T	P	T	P	T	
11	Assistant Draftsmen ...	4	...	4	4	...	...	8	4	......
12	Tracers	4	...	4	4	...	...	8	4	......
13	Accounts Superintendents...	...	...	...	...	...	...	...	...	Not necessary in view of proposed transfer of Accts. Estt. to the control of State Accts. Dept.
14	I Division Accounts Clerks	...	...	...	...	...	...	...	...	
15	II Division Accounts Clerks	...	...	...	...	...	...	...	...	
16	Reserve Accountants ...	...	...	...	...	...	...	...	...	
17	Supervisors ...	12	...	15	13	...	...	27	13	
18	Stock-Verifiers ...	...	...	...	...	...	...	...	...	
19	Attenders ...	3	...	3	3	10	...	16	3	
20	Jamedars ...	1	...	1	...	...	...	2	...	
21	Daffedars ...	2	...	2	...	...	...	4	...	
22	Peons	12	...	13	11	13	...	38	11	

23	Watchmen ...	2	...	2	...	...	...	4	...	
24	Sweepers ...	2	...	2	...	...	...	4	...	
25	Cycle Orderlies ...	2	...	2	...	...	...	4	...	
	Gazetted Establishment.									
1	Chief Engineer ...	1	...	1	...	...	...	2	...	
2	Superintending Engineer ...	1	...	1	1	...	...	2	1	
3	Executive Engineers ...	1	...	1	1	...	...	2	1	
4	Assistant Engineers ...	2	...	3	3	...	...	5	3	......
5	Chief Accounts Officer ...	...	...	...	...	...	...	...	...	Proposed to work under Controller of State Accounts.
6	Financial Assistant ...	...	...	...	...	1	...	1	...	For Budget and General.
7	General Assistant ...	...	...	...	...	1	...	1	...	For Establishment.
8	Registrar ...	...	..	...	...	1	...	1	...	For the Offices of C.E., Roads, Buildings and General and also C.E. Irrigation and Public Health.

APPENDIX VI—E.

Comparative Statement of the Establishment of the offices of the Chief Engineers of Public Works Department.

Serial No.	Designation	Existing				Recommended						Net difference	Remarks
		Chief Engr., M.I. (N)	Chief Engr., M.I. (S)	Chief Engr., (Gl.)	Total	Chief Ergr., Irrigation Projects	Chief Engr. Irn. and Public Health		Chief Engr., Roads, Bldgs. and General	Establishment, Budget, Records, etc.	Total		
1	2	3	4	5	6	7	8		9	10	11	12	13
						T	P	T	P	P			
	Gazetted Establishment												
1	Chief Engineer ...	1	1	1	3	1	1	...	1	...	3	...	...
2	Superintending Engineers.	...	...	...	...	...	1	1	1	...	3	3	Due to formation of Designs Section in Chief Engineers' offices.
3	Executive Engineer ...	1	2	3	6	1+	1	1	1	...	6	...	...
4	Assistant Engineer ...	3	4	7	14	3+	3	3	2	...	13	—1	...
5	Registrar ...	1	...	...	1	1	...	...	...	1	2	1	For Records, Tappals, Furniture, Library, etc.
6	Financial Assistant ...	1	1	1	3	1	...	...	...	1	2	—1	One is adequate for Budget, Accounts and also general matters.
7	General Assistant ...	...	...	1	1	...	...	...	...	1	1	...	...
	Non-Gazetted Establishment.												
1	Managers ...	1	1	1	3	1	1	1	1	...	4	1	Due to the formation of Designs Sections to look after routine work and correspondence

2	Superintendents ...	4	2	7	13	4	2	2	3	4	15	2	Due to formation of Designs Section.
3	I Division Clerks ...	17	7	27	51	17	8	7	7	18	57	6	Do do
4	II Division Clerks ...	25	8	38	71	25	10	10	12	25	82	11	For Designs Sections and also due to the increased work in different branches.
5	Stenographers ...	5	1	3	9	5	3	1	3	...	12	3	For Superintending Engineers (3) of Design Sections.
6	I Division Typists ...	...	...	...	...	...	2	2	2	1	7	7	Due to increased work alround, integration and also formation of Designs Sections.
7	II Division Typists ...	8	4	12	24	8	3	3	2	9	25	1	Do do
8	Supervisors ...	16	5	17+4	38+4	16	15	13	12	...	56	14	Do do
9	Sub-Overseers ...	12	...	...	12	...	...	...	...	...	...	—12	These will be withdrawn and Draftsmen as provided for other two offices have been proposed.
10	Head Draftsmen ...	...	1	1	2	1	1	1	1	...	4	2	Due to increased work alround and also formation of Designs Sections.
11	Draftsmen, I Grade ...	...	3	3	6	3	3	2	3	...	11	5	Do do
12	Draftsmen, II Grade ...	...	...	2	2	2	2	...	2	...	6	4	There has been corresponding decrease in the number of Sub-Overseers (under item 9) who are to be withdrawn and Draftsmen posted to Office of the Chief Engineer, Major Irrigation Projects.
13	Asst. Draftsmen ...	...	3	10	13	4	4	4	4	...	16	3	Due to the formation of Designs Sections.
14	Tracers ...	9	4	10	23	9	4	4	4	...	21	—2	...
15	Attenders ...	...	3	11	14	...	3	3	3	10	19	5	Due to increased work alround, integration and formation of Designs Sections.
16	Jamedars ...	1	1	1	3	1	1	...	1	...	3	...	...
17	Daffedars ...	2	1	2	5	2	2	...	2	...	6	1	For Designs Section.
18	Peons ...	48	10	36	94	48	13	11	12	13	97	3	Due to increased work alround and formation of Designs Sections.
19	Watchmen ...	...	...	4	4	...	2	...	2	...	4	...	...
20	Sweepers ...	...	...	4	4	...	2	...	2	...	4	..	...
21	Cycle Orderlies ...	...	...	3	3	...	2	..	2	...	4	1	Due to increased work.

APPENDIX VI-F.

Establishment for Schedule of Rates.

Sl. No.	Particulars			Recommended	Remarks
1	Executive Engineer	...	...	1	...
2	Assistant Engineers	...	...	2	...
3	Supervisors	...	...	6	...
4	Draftsman	...	...	1	...
5	Assistant Draftsmen	...	...	2	...
6	Tracers	...	...	2	...
7	I Division Clerks	...	...	2	...
8	I Division Typists	..	...	2	...
9	Attender	..	...	1	...
10	Peons	...	...	4	...

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APPENDIX VI-G.

Establishment proposed for Circle Division and Sub-Division Offices.

Sl. No.	Description	Superintending Engineer's Office	Executive Engineer's Office	Assistant Engineer's Office	Remarks
1	Superintending Engineer ...	1	...	...	...
2	Executive Engineer ...	...	1	...	...
3	Assistant Engineers ...	1+1*	1	1	*One for minor irrigation works.
4	Supervisors ...	1+1 for each Dn.	3	3	
5	Manager ...	1	...	...	...
6	Office Superintendent or Head Clerk.	1	1	...	...
7	I Dn. Clerks ...	5	2	1	...
8	II Dn. Clerks ...	4	1+1 for each Sub-Dn.	3	...
9	Divisional Accountant ...	...	1	...	...
10	I Dn. Accounts Clerks ...	...	2(*a*)	...	(*a*) One for completion and one for cash branch.
11	II Dn. Accounts Clerks ...	...	(*b*) 2+1 for each Sub-Dn.	...	(*b*) One for store accounts and one as reserve.
12	Steno-Typist ...	1	1	...	...
13	Typists ...	4	2	...	...
14	Store-Keeper ...	...	1	...	...
15	Assistant Store-Keeper ...	...	1	...	...
16	Head Draughtsman ...	...	...	...	...
17	Draughtsmen I Gr. ...	1	...	...	...
18	Do II Gr.	1	1	...	...
19	Do III Gr. (Asst.)	1 for each Dn.	2	1	...
20	Overseers ...	...	...	4	...
21	Tracers ...	2	1	...	...
22	Computors	1	1	...	...
23	Blue Printer ...	2	1	...	...
24	Attenders ...	2	...	...	...
25	Peons ...	8	6	2	...
26	Sweepers ...	2	...	...	...

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APPENDIX VI-H.

G. VENKATA KRISHNA RAO, I.A.S.,
Secretary to Government, Planning and Development Department and Additional Development Commissioner.

Mysore Government
Secretariat,
Vidhana Soudha,
Bangalore,

Dated 11*th March* 1958.

D.O. No. PERS 693—57.

DEAR SRI NARASINGA RAO,

Please refer to the discussions I had with you on 7th March, 1957, when we visited Nelamangala, Magadi and Ramanagaram Blocks to have an idea of the works programme in the blocks and the work load on the Public Works Department staff.

As desired by you, I enclose herewith a statement indicating the population of each of the 168 taluks in the State, and the number of blocks that have been allotted to 86 of them, and are allotable to the rest. It is proposed to cover the entire State with N.E.S. Blocks by 1963. According to the revised programme of Community Development, a sum of Rs. 12 lakhs is proposed to be spent during a period of 5 years. I feel that during this period, the Public Works Department staff will have to be (1) one Graduate Surveyor or a Sub-Engineer *and* (2) a Sub-Overseer. I feel that 50 per cent of the Blocks may have Sub-Engineers and the other 50 per cent may be Graduate Surveyors. This would afford adequate opportunities for the licentiates also.

You observed in the Blocks that the technical supervision of the works executed by the Sub-Engineer was badly lacking. This can be rectified, only if the regular Public Works Department staff are fully brought into the picture. I would suggest that one Assistant Engineer be posted to every taluk. In the case of taluks with a small population or small area, one Assistant Engineer may be in charge of two taluks. *Per contra,* in the case of taluks which are large in area or with a huge population, two Assistant Engineers may be in-charge of one taluk. The Assistant Engineer may be in charge of all the Public Works Department works in the Taluk including maintenance of roads, construction and repair of Government buildings, Minor Irrigation, and also be in charge of the works programme in the N.E.S. Blocks. The Assistant Engineer would, in his turn, be supervised by the Executive Engineer in charge of the Division.

While administrative sanction to the estimates, etc., would be accorded by the various officers in the hierarchy of the Development Departments, execution and technical supervision of the works would rest entirely with the Public Works Department. The powers of technical sanction would also have to be suitably decentralised so that work proceeds expeditiously. Our Block Development Officers are empowered to sanction estimates up to

Rs. 4,000. I would, therefore, suggest that the Assistant Engineers should be empowered to accord technical sanction to estimates for the same amount and also to call for tenders and to accept them. The Assistant Commissioners are empowered to sanction estimates up to Rs. 10,000 and the Deputy Commissioners up to Rs. 25,000. I hope that this would be taken into account while giving suitable powers of sanction to the Executive Engineers and the Superintending Engineers concerned.

I hope that the information now given is sufficient, and if any further information is required, I would be happy to pass it on to you.

With regards,

Yours sincerely,

(Sd.) G. V. K. RAO,

Shri B. S. Narasinga Rao, B.E.,
Chairman, Public Works Department
Reorganisation Committee,
Bangalore.

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